TECHNICAL MEMORANDUM



Monitored Natural Attenuation Monitoring June 2020 OMC Plant 2 Site (OU4), Waukegan, Illinois WA No. 237-RARA-0528/Contract No. EP-S5-06-01

PREPARED FOR: Sarah Rolfes/U.S. Environmental Protection Agency (EPA)

PREPARED BY: CH2M HILL, Inc. (CH2M)

DATE: August 13, 2020

PROJECT NUMBER: 696001.CV.01

REVISION NO.:

Introduction

This memorandum documents the field activities and results associated with the monitored natural attenuation (MNA) groundwater sampling conducted in June 2020 at the Outboard Marine Corporation (OMC) Plant 2 Site (Operable Unit [OU] 4) in Waukegan, Illinois. Injections were conducted in April and May 2018 and included the treatment of two trichloroethene (TCE) hotspot and three lower-concentration source areas shown in Figure 1. The work is pursuant to Technical Direction Memorandum No. 1 received from EPA (dated July 17, 2017) authorizing a second injection event and pre- and post-injection monitoring to evaluate the performance of the treatment and the MNA sitewide remedy. As specified in EPA's Record of Decision (EPA 2009), the overall remedial action objective for the groundwater remedy is to reduce the concentrations of the chemicals of concern (TCE, cis-1,2-dichloroethene [cis-1,2-DCE], and vinyl chloride) to levels that would allow the groundwater to be used for residential purposes without restrictions.

The monitoring wells in the performance and sitewide well networks and analysis to be performed as part of the monitoring program were documented in the *Quality Assurance Project Plan Addendum III Letter* approved by EPA on April 5, 2019 (CH2M 2019).

Field Activities

The MNA groundwater sampling event was conducted from June 1 to 4, 2020, and included the following:

- Collected depth to water, water quality measurements, and groundwater samples from 34 performance monitoring wells and 29 sitewide monitoring wells. The sitewide wells include the 10 wells (well nests ST-MW1, ST-MW2, ST-MW3, ST-MW4, and ST-MW5) installed by SulTRAC around the polychlorinated biphenyl (PCB) containment cell and 6 wells (nests MW-3, MW-11, and MW-516) located on the Larsen Marine Services property. Table 1 and Figure 1 show the monitoring well locations.
- Managed groundwater purge water in 5-gallon buckets, and temporarily stored water in tanks and then treated it by the onsite water treatment system.
- The locations (63 locations) were sampled for analysis of volatile organic compounds (VOCs), dissolved metals (arsenic, iron, and manganese), and MNA parameters (alkalinity, anions [chloride, nitrate, nitrite, and sulfide], dissolved gases [methane, ethane, and ethene], and total organic

FES0816201302MKE 1

MONITORED NATURAL ATTENUATION MONITORING – JUNE 2020 OMC PLANT 2 SITE (OU4), WAUKEGAN, ILLINOIS WA NO. 237-RARA-0528/CONTRACT NO. EP-S5-06-01

carbon [TOC]). Twenty-one of the 63 locations were also sampled for PCB analysis. The 21 locations sampled for PCBs included the 10 SulTRAC monitoring wells and 11 sitewide monitoring well locations along the eastern and southern site boundaries, which were previously approved by EPA. Figures 2a and 2b show the contaminant distribution based upon the total detected concentrations of TCE, cis-1,2-DCE, and vinyl chloride in the shallow and deep portions of the aquifer.

Groundwater Sampling

Groundwater samples were collected using low-flow methods as described in the quality assurance project plan (CH2M 2013). The monitoring wells were purged until the field parameters (temperature, specific conductance, dissolved oxygen, pH, oxidation reduction potential, and turbidity) were stable based on readings from a YSI multi-parameter flow-through cell. The low-flow parameters were recorded for each well (Attachment 1). Figures 3a and 3b show the water level elevations for the shallow and deep portions of the aguifer.

Samples requiring VOC, PCB, and dissolved metals analysis were submitted to a laboratory within EPA's Contract Laboratory Program, while MNA samples were sent to Katahdin Analytical Services of Scarborough, Maine.

Waste Management

Purge water from the sampling was containerized and treated by the water treatment system related to the onsite consolidation facility.

Personal protective equipment was doubled-bagged and placed with the general waste from the site for disposal.

Data Management and Evaluation

The field sample data were entered into EPA's Scribe software. The data were used to create chain-of-custody forms and for tracking purposes.

Following sample analysis, the Contract Laboratory Program laboratory transmitted the analytical data and supporting documentation to EPA for validation, after which, an electronic analytical report and an electronic and hard-copy validation reports were sent to CH2M. Following EPA's data validation, the CH2M project chemist reviewed the validation summaries and entered the qualifiers into the project database. Attachment 2 contains the data usability evaluation technical memorandum.

Analytical Results

Table 2 shows stabilized field parameter results for samples collected in June 2020. Table 3 contains analytical laboratory results for VOC, PCBs, dissolved metals, dissolved gases, TOC, and the MNA parameters.

Conclusions and Recommendations

The analytical results for TCE, cis-1,2-DCE, and vinyl chloride are relatively similar to the previously collected data from March 2020. The groundwater quality and analytical results from the previous monitoring (April 2014 through December 2016), March 2018 pre-injection, and August 2018 post-injection sampling event can be compared to evaluate the effectiveness of the supplemental treatment. CH2M recommends continuing quarterly groundwater performance monitoring with the purpose of evaluating the overall performance of the enhanced in situ biodegradation and in situ chemical reduction treatment in reducing chlorinated VOC concentrations in the groundwater.

2 FES0816201302MKE

References

CH2M HILL, Inc. (CH2M). 2013. *Quality Assurance Project Plan, Revision 2, OMC Plant 2 Site, Waukegan, Illinois. WA No. 105-RARA-0528, Contract No. EP-S5-06-01.* March.

CH2M HILL, Inc. (CH2M). 2019. *Quality Assurance Project Plan Addendum III Letter, OMC Plant 2 Site, Waukegan, Illinois. WA No. 237-RARA-0528, Contract No. EP-S5-06-01*. April.

U.S. Environmental Protection Agency (EPA). 2009. *Record of Decision, Outboard Marine Corporation Superfund Site, Waukegan. Lake County, Illinois*. February.

FES0816201302MKE 3

Tables

Table 1. Summary of Well IDs and Analytes for MNA Groundwater Sampling

June 2020 MNA Performance Monitoring

Well Number	FD	MS/MSD	VOCs	PCBs	MNA ^a	Dissolved Metals	Date Collected
MW-11D	Χ		Χ		Х	Χ	6/1/2020
MW-11S			Χ		Х	Χ	6/1/2020
MW-3D			Χ	Х	Χ	Χ	6/1/2020
MW-3S			Χ		Х	Χ	6/1/2020
MW-501D			Χ	Χ	Χ	Χ	6/3/2020
MW-501S			Х	Χ	Χ	Χ	6/3/2020
MW-513D			Х		Х	Х	6/1/2020
MW-513S			Χ		Х	Х	6/1/2020
MW-516D		Х	Х		Х	Х	6/2/2020
MW-516S			Х		Х	Х	6/2/2020
MW-528D			Х		Х	Х	6/2/2020
MW-528S			Х		Х	Х	6/1/2020
MW-600D			Х		Х	Х	6/1/2020
MW-600S			Х		Х	Х	6/1/2020
MW-601D			Х		Х	X	6/4/2020
MW-601S		Х	Х		Х	Х	6/4/2020
MW-602D	Х		Х		Х	Х	6/3/2020
MW-602S			Х		Х	Х	6/2/2020
MW-603D			Х		Х	Х	6/1/2020
MW-603S			Х		Х	Х	6/1/2020
MW-604D			Х		Х	Х	6/2/2020
MW-604S			Х		Х	Х	6/2/2020
MW-605D	Х		Х		Х	Х	6/2/2020
MW-605S			Х		Х	Х	6/2/2020
MW-606D			Х		Х	Х	6/4/2020
MW-606S			Х		Х	Х	6/4/2020
MW-607D			Х		Х	Х	6/4/2020
MW-607S			Х		Х	Х	6/3/2020
MW-610D			Х	Х	Х	Х	6/2/2020
MW-610S			Х	Х	Х	Х	6/2/2020
MW-612D			Х		Х	Х	6/3/2020
MW-612S	Х		Х		Х	Х	6/2/2020
MW-613D			Х	Х	Х	Х	6/3/2020
MW-613S			Х		Х	Х	6/3/2020
MW-614D			Х		Х	Х	6/3/2020
MW-614S			Х		Х	Х	6/3/2020
MW-615D			Х		Х	Х	6/1/2020
MW-615S			Х		Х	Х	6/1/2020
MW-619D			Х		Х	Х	6/3/2020
MW-619S			X		X	X	6/3/2020
MW-620D			X		X	X	6/4/2020
MW-620S			X		X	X	6/4/2020

Table 1. Summary of Well IDs and Analytes for MNA Groundwater Sampling

June 2020 MNA Performance Monitoring

OMC Plant 2 Site (OU4) - Waukegan, IL

Well Number	FD	MS/MSD	VOCs	PCBs	MNA^a	Dissolved Metals	Date Collected
MW-621D			Х		Х	Х	6/4/2020
MW-621S	Х		Х		Х	Х	6/4/2020
MW-623D			Х	Х	Х	Х	6/3/2020
MW-623S			Χ	Χ	Х	Х	6/4/2020
MW-624D			Χ	Χ	Х	Х	6/4/2020
MW-624S	Х		Χ	Χ	Х	Х	6/4/2020
W-5	Х		Х	Χ	Х	Х	6/4/2020
ST-MW-1D			Χ	Χ	Х	Х	6/2/2020
ST-MW-1S			Χ	Χ	Х	Х	6/2/2020
ST-MW-2D		Х	Χ	Χ	Х	Х	6/3/2020
ST-MW-2S			Х	Χ	Х	Х	6/2/2020
ST-MW-3D			Х	Х	Х	Х	6/3/2020
ST-MW-3S			Χ	Χ	Х	Х	6/3/2020
ST-MW-4D			Χ	Х	Х	Х	6/3/2020
ST-MW-4S			Х	Х	Х	Х	6/4/2020
ST-MW-5D			Χ	Х	Х	Х	6/4/2020
ST-MW-5S		Х	Х	Х	Х	Х	6/4/2020
MW-625D			Х		Х	Х	6/2/2020
MW-625S			Х		Х	Х	6/2/2020
MW-626D			Х		Х	Х	6/4/2020
MW-626S			Х		Х	Х	6/3/2020

Notes:

^aMNA includes alkalinity, anions [chloride, nitrate, nitrite, and sulfate], sulfide, dissolved gases [methane, ethane, and ethene], and TOC. Field duplicates collected for every 10 samples and MS/MSD for every 20 samples.

One field blank and one equipment blank collected.

FD = field duplicate, ID = identification, MNA = monitored natural attenuation, MS/MSD = matrix spike/matrix spike duplicate, TOC = total organic carbon, VOC = volatile organic compounds

Table 2. Field Parameters, June 2020

OMC Plant 2 Site (OU4) - Waukegan, IL

		MW-003S	MW-003D	MW-011S	MW-011D	MW-501S	MW-501D	MW-513S	MW-513D	MW-516S	MW-516D	MW-528S	MW-528D	MW-600S	MW-600D	MW-601S	MW-601D
		06/01/2020	06/01/2020	06/01/2020	06/01/2020	06/03/2020	06/03/2020	06/01/2020	06/01/2020	06/02/2020	06/02/2020	06/01/2020	06/02/2020	06/01/2020	06/01/2020	06/04/2020	06/04/2020
Depth to Water	ft btoc	4.43	4.16	4.38	4.32	3.16	3.11	1.78	1.82	1.15	1.31	3.4	3.33	3.41	3.45	3.24	3.36
Dissolved Oxygen	mg/L	0.63	0.53	0.53	0.52	0.45	0.23	2.5	0.33	0.49	0.38	8.17	9.53	0.08	0.04	0.32	0.46
Electrical Conductivity	mS/cm	0.3	5.877	1.411	1.522	0.474	0.612	0.631	1.181	0.879	9.005	0.542	1.249	0.675	2.062	0.61	2.503
Flow Rate	mL/min	250	350	250	300	280	300	300	300	350	300	320	320	240	240	400	400
Oxidation Reduction Potential	mV	14.4	-86.7	-14.7	-127.1	-88.8	-150	131.3	-84.1	23.6	-132.4	101.7	170.4	-83.9	-105.9	-208.6	-83.1
рН	pH units	7.28	7.04	7.27	7.34	7.27	7.55	7.24	7.33	6.89	7.49	7.68	7.06	6.54	6.5	7.13	6.11
Temperature	°C	11.67	11.23	12.06	11.6	14.22	13.33	11.82	11.9	18.4	13.69	14.64	13.34	13.25	12.49	12.73	12.75
Turbidity	NTU	0	0	23.4	6.9	3.1	2.7	0	0	0.5	52.3	0.7	0	1.9	41.2	11.6	8.8

Notes:

°C = degrees Celsius

ft btoc = feet below top of casing

mg/L = milligrams per liter

mL/min = millimeters per minute

mS/cm = milliSiemens per centimeter

mV = millivolts

Table 2. Field Parameters, June 2020

OMC Plant 2 Site (OU4) - Waukegan, IL

		MW-602S	MW-602D	MW-603S	MW-603D	MW-604S	MW-604D	MW-605S	MW-605D	MW-606S	MW-606D	MW-607S	MW-607D	MW-610S	MW-610D	MW-612S	MW-612D
		06/02/2020	06/03/2020	06/01/2020	06/01/2020	06/02/2020	06/02/2020	06/02/2020	06/02/2020	06/04/2020	06/04/2020	06/03/2020	06/04/2020	06/02/2020	06/02/2020	06/02/2020	06/03/2020
Depth to Water	ft btoc	2.97	2.95	2.93	2.52	2.4	2.55	4.23	4.2	3.4	3.89	3.38	3	5.95	5.82	3.4	3.12
Dissolved Oxygen	mg/L	0.22	0.21	0.41	0.33	0.12	6.33	0.36	0.29	0.44	0.44	0.3	0.22	11.35	0.33	0.05	0.09
Electrical Conductivity	mS/cm	0.612	2.87	0.575	3.997	1.04	3.514	0.535	2.164	0.636	3.537	0.4	1.67	0.772	1.468	1.163	3.96
Flow Rate	mL/min	280	300	500	400	200	200	400	500	360	200	200	300	320	300	200	200
Oxidation Reduction Potential	mV	-127.1	-177.1	-67.6	-22.2	-125.1	-114.6	-59	-72	-55.3	-169.9	-197.7	-62.3	189.2	-142	-77.8	-140.3
рН	pH units	7.09	7.75	7.21	6.41	6	6.6	6.89	6.56	7.9	7.21	7.42	7.22	7.33	7.23	5.47	6.38
Temperature	°C	14.3	12.39	13.17	11.61	18.3	18.82	14.48	12.46	14.51	16.96	16.94	13.94	13.29	13.94	15.67	14.15
Turbidity	NTU	0	0.4	4.1	8.4	1.3	141	0	0	9.9	15.4	4.79	0	0.6	18.2	2.8	9.9

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Table 2. Field Parameters, June 2020

OMC Plant 2 Site (OU4) - Waukegan, IL

		MW-613S	MW-613D	MW-614S	MW-614D	MW-615S	MW-615D	MW-619S	MW-619D	MW-620S	MW-620D	MW-621S	MW-621D	MW-623S	MW-623D	MW-624S	MW-624D	MW-625S	MW-625D	MW-626S
		06/03/2020	06/03/2020	06/03/2020	06/03/2020	06/01/2020	06/01/2020	06/03/2020	06/03/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/03/2020	06/04/2020	06/04/2020	06/02/2020	06/02/2020	06/03/2020
Depth to Water	ft btoc	4.31	4.2	3.33	3	4.48	3.99	4.01	4.05	4.18	4.52	4.59	4.05	3.06	3.21	5.16	5.21	2.74	3.3	5.44
Dissolved Oxygen	mg/L	0.29	0.27	0.11	0.23	0.4	0.25	0.33	0.27	0.43	0.55	0.33	0.33	0.69	0.47	1.51	0.52	0.29	0.26	0.05
Electrical Conductivity	mS/cm	1.357	2.265	0.72	4.564	0.654	3.95	0.364	1.947	1.141	2.984	1.209	4.042	0.516	0.685	0.457	2.305	0.341	2.871	1.137
Flow Rate	mL/min	200	200	210	200	300	300	400	400	260	300	200	100	320	280	300	280	400	400	240
Oxidation Reduction Potential	mV	7.5	-310	-77.9	394.3	-91.4	-314.6	137.3	-196.1	-75.9	-120	-110.6	-90.9	-145.4	-134.4	179.8	-100.1	-97.9	-80.4	-77.7
рН	pH units	7.18	7.35	6.77	7.42	7.21	9.11	7.88	8.71	6.9	6.9	6.78	6.3	7.28	7.48	7.22	7.36	7.92	8.59	4.98
Temperature	°C	12.28	12.56	13.75	17.23	12.81	11.78	12.85	10.92	15.49	15	12.84	13.05	16.73	14.06	16.81	15.28	13.76	12.37	13.26
Turbidity	NTU	3.75	9.84	0	2.9	8.8	6.1	5.35	9.18	1.2	8.6	1.7	12.5	0	2.1	0	0	0	0	0

Notes:

°C = degrees Celsius

ft btoc = feet below top of casing

mg/L = milligrams per liter

mL/min = millimeters per minute

mS/cm = milliSiemens per centimeter

mV = millivolts

Table 2. Field Parameters, June 2020

OMC Plant 2 Site (OU4) - Waukegan, IL

		MW-626D	ST-MW-1S	ST-MW-1D	ST-MW-2S	ST-MW-2D	ST-MW-3S	ST-MW-3D	ST-MW-4S	ST-MW-4D	ST-MW-5S	ST-MW-5D	W-5
		06/04/2020	06/02/2020	06/02/2020	06/02/2020	06/03/2020	06/03/2020	06/03/2020	06/04/2020	06/03/2020	06/04/2020	06/04/2020	06/04/2020
Depth to Water	ft btoc	5.68	1.32	1.11	0.98	0.92	0.7	0.7	2.6	2.56	3.2	3.15	5.35
Dissolved Oxygen	mg/L	0.45	0.51	0.43	0.47	0.45	0.47	0.5	0.54	1.36	0.51	0.45	0.43
Electrical Conductivity	mS/cm	2.505	1.146	2.067	0.701	1.165	1.306	1.275	1.653	1.176	1.088	0.888	1.403
Flow Rate	mL/min	320	300	350	300	350	400	400	200	200	250	375	300
Oxidation Reduction Potential	mV	-145.5	-68	-78.4	-87.1	-132.1	-102.7	-80	-123.6	-12.1	-122.9	-139.8	193
рН	pH units	7.84	6.95	6.99	6.89	7.09	7.33	7.21	7.12	7.38	7.14	7.43	7.29
Temperature	°C	12.44	15.22	14.44	13.3	11.23	13.52	12.7	14.7	13.74	17.11	14.42	12.86
Turbidity	NTU	1.4	1	14.2	5.9	15.9	9.2	8.7	7.9	12.6	0.7	4.1	0

Notes:

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ft btoc = feet below top of casing

mg/L = milligrams per liter

mL/min = millimeters per minute

mS/cm = milliSiemens per centimeter

mV = millivolts

Table 3. Analytical Results, June 2020

Monitored Natural Attenuation Monitoring - June 2020

Paymentee Mart				MW-003S	MW-003D	MW-011S	MW-011D	MW-501S	MW-501D	MW-513S	MW-513D	MW-516S	MW-516D	MW-528S	MW-528D	MW-600S
Post-principle Post	Parameter	MCL ^a	Unit	06/01/2020	06/01/2020	06/01/2020	06/01/2020	06/03/2020	06/03/2020	06/01/2020	06/01/2020	06/02/2020	06/02/2020	06/01/2020	06/02/2020	06/01/2020
Note	Polychlorinated Biphenyls (PCBs)															
Note		-	μg/L	-	1 U	-	-	1 U	1 U	-	-	-	_	-	-	
Aground 1935 Bight	Aroclor 1221	-		-		-	-			-	-	-	_	-	-	
Marches 148	Aroclor 1232	-		-		_	-			-	-	-	_	-	-	
Accord 1986	Aroclor 1242	_		-		-	-			-	-	-	_	-	-	
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1.2-Oblinopropance																
1.3-Dichlorobenzence																
1.4-Olchorobenene																
- Herkanone - He/L 10U																
2-Hexanore - Mg/L 10U																
Amethyle-Pentanone		-														
Acetone -1																
Emerane		-														
Second Company Seco		-														
Secondichloromethane Seco																
Bromoform B0																
Bromomethane																
Carbon Disulfide		80														
Carbon tetrachloride		-														
Chlorobenzene 100 μg/L 5 U		-														
Chlorodibromomethane S0		5					5 U				5 U					
Chloroethane - μg/L SU																
Chloroform S0		80														
Chloromethane											5 U					
Cis-1,2-Dichloroethene 70		80			5 U	5 U	5 U		5 U	5 U	5 U	5 U			5 U	
cis-1,3-Dichloropropene - µg/L 5 U					5 U	5 U		5 U		5 U	5 U	5 U				
Cyclohexane - µg/L 5 U		70			5 U	5 U	1200	_	9.5	5 U	5 U	5 UJ			3.9 J	
Dichlorodifluoromethane		-								5 U	5 U					
Ethylbenzene 700 μg/L 50		-		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U		5 U	5 U	
Freon 113 - μg/L 5 U 5				5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U			5 U	
Sopropylbenzene - μg/L 5U 5U 5U 5U 5U 5U 5U 5		700		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl Acetate - μg/L 5 U	Freon 113	-		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether (MTBE) - μg/L 5U	Isopropylbenzene	-	μ <mark>g/</mark> L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
		-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane - μg/L 5U	Methyl tert-butyl ether (MTBE)	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
	Methylcyclohexane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U

Table 3. Analytical Results, June 2020

OMC Plant 2 Site (OU4) - Waukegan, IL

			MW-003S	MW-003D	MW-011S	MW-011D	MW-501S	MW-501D	MW-513S	MW-513D	MW-516S	MW-516D	MW-528S	MW-528D	MW-600S
Parameter	MCL ^a	Unit	06/01/2020	06/01/2020	06/01/2020	06/01/2020	06/03/2020	06/03/2020	06/01/2020	06/01/2020	06/02/2020	06/02/2020	06/01/2020	06/02/2020	06/01/2020
Methylene Chloride	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	100	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	1,000	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	μg/L	5 U	5 U	5 U	3.6 J	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U
trans-1,3-Dichloropropene	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethylene	5	μg/L	5 U	5 U	5 U	2.5 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Chloride	2	μg/L	5 U	5 U	7	880	2.7 J	2.6 J	5 U	17	5 U	5 U	5 U	5 U	5 U
Xylene, o ^c	10,000	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Xylenes, m & p ^c	10,000	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dissolved Metals															
Arsenic	10	μg/L	37.4	871	10 U	13.7 J+	33.2	64.1	10 U	10 U	10 U	320	10 U	10 U	10 U
Iron		μg/L	100 UJ	11600 J	304 J	5640 J	1610	2120	100 UJ	1670 J	121 J	1350 J	100 UJ	100 UJ	3410 J
Manganese		μg/L	45.6	224	462	46.1	171	62.5	11.9 J	173	549	58	15 U	10 J	546
Wet Chemistry															
Ethane		μg/L	10 U	10 U	10 U	120	10 U	73 J							
Ethene		μg/L	10 U	10 U	2.7 J	250	10 U	68 J							
Methane		μg/L	15	2500	25	2900	98	290	390	550	650	34000	10 U	10 U	17000
Alkalinity, Total (as CaCO3)	-	mg/L	140	1300	270	510 J	270	290	270	290	370	940	170	220	320
Chloride (CI)	-	mg/L	7.2	770	270	220	7.3 U	32	23	140	21	1600	15	130	9
Nitrate (as N)	-	mg/L	0.095 U	0.2 U	0.065 U	0.05 U	0.05 R	0.12 U	0.12 U	0.05 U	0.05 R	0.05 R	2.2	1.5 J	0.05 U
Nitrite (as N)		mg/L	0.1	1.4	0.41	0.5	0.05 R	0.25	0.13	0.25	0.05 R	0.05 R	0.1	0.05 R	0.15
Sulfate	-	mg/L	22	1400	140	54	5.2 U	17	53	130	49	1 UJ	85	150	49
Sulfide	-	mg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Organic Carbon	-	mg/L	1 U	12	2.8	8.6	4	3.5	2.9	2.8	1.4	34 N	1 U	1.8	3.4 3.4

Notes:

J indicates the result is an estimated quantity.

U indicates he analytes was not detected above the reported quantitation limit (QL).

UJ indicates the analyte was not detected above the QL and the QL is approximate

μg/L = micrograms per liter

- = no criteria

Greyed cells indicate detection over the MCL

^a Maximum Contaminant Level (MCL), EPA National Primary Drinking Water Regulations, EPA 816-F-09-004, May 2009

^b MCL is for Total Trihalomethanes, includes the individual trihalomethanes (bromodichloromethane, chlorodibromomethane, chloroform, tribromomethane).

^c MCL is for Total Xylenes, includes m,p-Xylene and o-Xylene; the MCL for total Xylenes was considered an evaluation surrogate.

Table 3. Analytical Results, June 2020

Monitored Natural Attenuation Monitoring - June 2020

			MW-600D	MW-601S	MW-601D	MW-602S	MW-602D	MW-603S	MW-603D	MW-604S	MW-604D	MW-605S	MW-605D	MW-606S	MW-606D
Parameter	MCL ^a	Unit	06/01/2020	06/04/2020	06/04/2020	06/02/2020	06/03/2020	06/01/2020	06/01/2020	06/02/2020	06/02/2020	06/02/2020	06/02/2020	06/04/2020	06/04/2020
Polychlorinated Biphenyls (PCBs)															
Aroclor 1016	-	μg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1221	-	μg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1232	-	μg/L	-	-	-	-	-	-	-	-	-	_	-	-	-
Aroclor 1242	-	μg/L	-	_	-	-	-	-	-	_	-	_	_	-	-
Aroclor 1248	-	μg/L	-	-	-	-	-	-	-	-	-	_	-	-	-
Aroclor 1254	-	μg/L	-	-	-	-	-	-	-	-	-	_	-	-	-
Aroclor 1260	-	μg/L	-	_	-	-	-	-	-	_	-	_	_	-	_
Aroclor 1262	-	μg/L	-	-	-	-	-	-	-	-	-	_	-	-	-
Aroclor 1268	-	μg/L	-	-	-	-	-	-	-	-	-	_	-	-	-
Volatile Organic Compounds															-
1,1,1-Trichloroethane	200	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	_	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	_	μg/L	5 U	5 U	0.9 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	μg/L	5 U	5 U	5 U	5 U	17	5 U	4.7 J	5 U	5 U	5 U	2.3 J	5 UJ	5 UJ
1,2,3-Trichlorobenzene	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromo-3-chloropropane	0.2	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromoethane	0.05	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	600	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	75	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	-	μg/L	10 U	16 J+	10 U	62	10 U	10 U	10 U	86					
2-Hexanone	-	μg/L	10 U												
4-Methyl-2-Pentanone	-	μg/L	10 U												
Acetone	-	μg/L	10 U	17 J+	10 U	100	10 U	10 U	10 U	40					
Benzene	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform [□]	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	-	μg/L	5 U	5 U	0.62 J	5 U	1.3 J	5 U	5 U	5 U	5 U	5 U	0.63 J	5 U	0.67 J
Carbon tetrachloride	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorodibromomethane ⁰	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.3 J	5 U	5 U
Chloromethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	μg/L	15	5 U	5 U	5 U	9300	4.3 J	1200 J-	35	5 U	100	4000	86 J-	370
cis-1,3-Dichloropropene	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cyclohexane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Freon 113	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Methyl Acetate	-	μg/L	12	5 U	140	5 U	33 J	2.7 J	100 U	5 U	5.1	5 U	190	5 U	13
Methyl tert-butyl ether (MTBE)	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U

Table 3. Analytical Results, June 2020

OMC Plant 2 Site (OU4) - Waukegan, IL

			MW-600D	MW-601S	MW-601D	MW-602S	MW-602D	MW-603S	MW-603D	MW-604S	MW-604D	MW-605S	MW-605D	MW-606S	MW-606D
Parameter	MCL ^a	Unit	06/01/2020	06/04/2020	06/04/2020	06/02/2020	06/03/2020	06/01/2020	06/01/2020	06/02/2020	06/02/2020	06/02/2020	06/02/2020	06/04/2020	06/04/2020
Methylene Chloride	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	100	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Tetrachloroethene	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Toluene	1,000	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
trans-1,2-Dichloroethene	100	μg/L	5 U	5 U	5 U	5 U	49	5 U	1.8 J	5 U	5 U	0.91 J	5	5 UJ	1.4 J-
trans-1,3-Dichloropropene	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethylene	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	16	5 U	5 U	5 UJ
Trichlorofluoromethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Chloride	2	μg/L	64	5 U	5 U	1.2 J	3800	2.3 J	740	190	14	24	2000	410	460
Xylene, o ^c	10,000	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Xylenes, m & p ^c	10,000	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Dissolved Metals															
Arsenic	10	μg/L	22.5	14.2 J+	13.1 J+	19.1 J+	14 J+	27.4	10 U	31.7	18.7 J+	13.2 J+	10 U	10 U	30.2
Iron		μg/L	11500 J	2690	115000	3020 J	637	11700 J	125000 J	22100 J	24900 J	3100 J	226000 J	52.8 J	9480
Manganese		μg/L	742	316	3220	221	812	301	1300	272	177	649	2220	129	1540
Wet Chemistry															
Ethane		μg/L	550	80	910	140	28	730	910	820	10 UJ	72	72 J	28	54 J
Ethene		μg/L	2300	10 U	3300	10 U	2100	140 J	22000	450 J	850 J	59	8000 J	97	780 J
Methane		μg/L	30000	13000	27000	15000	5000	20000	23000	22000	320 J	6700 J+	14000 J	22000	24000 J
Alkalinity, Total (as CaCO3)	-	mg/L	810	380	900	290	850	280	1200	460	1800	290	1000	200	2000
Chloride (CI)	-	mg/L	240	2.3 U	160	12 U	290	3.5	320	66	260	9.8	290	34	240
Nitrate (as N)	-	mg/L	0.05 U	0.05 U	0.05 U	0.13	0.05 U	0.05 R	0.036 J	0.045 J					
Nitrite (as N)	-	mg/L	0.42	0.12 J+	0.05 U	0.25	0.05 U	0.15	0.14	0.31	0.031 J	0.26	0.046 J	0.12	0.12
Sulfate	-	mg/L	12	12 J-	1 U	14	210	14	1 U	10 U	20 J	14	50	87	24
Sulfide	-	mg/L	1 U	1 U	1 U	1 U	1.5 U	1 U	4 U	1 U	1 U	1 U	1 U	1.4 U	1 U
Total Organic Carbon		mg/L	29	4 J	500 J	5.2	49	3.7 3.7	900 900	6.3	370 J	5.1 J	620 J	2.7 J	200 J

Notes:

J indicates the result is an estimated quantity.

U indicates he analytes was not detected above the reported quantitation limit (QL).

UJ indicates the analyte was not detected above the QL and the QL is approximate

μg/L = micrograms per liter

- = no criteria

Greyed cells indicate detection over the MCL

^a Maximum Contaminant Level (MCL), EPA National Primary Drinking Water Regulations, EPA 816-F-09-004, May 2009

^b MCL is for Total Trihalomethanes, includes the individual trihalomethanes (bromodichloromethane, chlorodibromomethane, chloroform, tribromomethane).

^c MCL is for Total Xylenes, includes m,p-Xylene and o-Xylene; the MCL for total Xylenes was considered an evaluation surrogate.

Table 3. Analytical Results, June 2020

Monitored Natural Attenuation Monitoring - June 2020

			MW-607S	MW-607D	MW-610S	MW-610D	MW-612S	MW-612D	MW-613S	MW-613D	MW-614S	MW-614D	MW-615S	MW-615D	MW-619S	MW-619D
Parameter	MCL ^a	Unit	06/03/2020	06/04/2020	06/02/2020	06/02/2020	06/02/2020	06/03/2020	06/03/2020	06/03/2020	06/03/2020	06/03/2020	06/01/2020	06/01/2020	06/03/2020	06/03/2020
Polychlorinated Biphenyls (PCBs)																
Aroclor 1016	-	μg/L	-	-	1 U	1 U	-	-	-	10 U	-	-	-	-	-	-
Aroclor 1221	-	μg/L	-	-	1 U	1 U	-	-	-	10 U	-	-	-	-	-	
Aroclor 1232	-	μg/L	-	-	1 U	1 U	-	-	-	10 U	-	-	-	-	-	-
Aroclor 1242	-	μg/L	=	-	1 U	1 U	-	=	-	10 U	-	-	=	-	-	-
Aroclor 1248	-	μg/L	-	-	1 U	1 U	-	-	-	1100	-	-	-	-	-	
Aroclor 1254	-	μg/L	-	-	1 U	1 U	-	-	-	10 U	-	-	-	-	-	-
Aroclor 1260	-	μg/L	-	-	1 U	1 U	_	-	-	10 U	-	-	-	-	-	-
Aroclor 1262	-	μg/L	-	-	1 U	1 U	-	-	-	10 U	-	-	-	-	-	-
Aroclor 1268	-	μg/L	-	-	1 U	1 U	_	_	_	10 U	_	-	-	_	_	_
Volatile Organic Compounds																
1,1,1-Trichloroethane	200	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	-	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	-	μg/L	5 U	500 U	5 U	2.4 J	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	μg/L	5 U	640	5 U	2 J	5 U	5 UJ	5 U	500 U	5 U	6.5	5 U	5 UJ	5 U	5 U
1,2,3-Trichlorobenzene	-	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5.5 5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromo-3-chloropropane	0.2	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromoethane	0.05	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	600	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	<u>-</u>	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	75	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone		μg/L	10 U	1000 U	10 U	10 U	10 U	49	10 U	1000 U	10 U	10 U	10 U	5 J	10 U	10 U
2-Hexanone		μg/L	10 U	1000 U	10 U	10 U	10 U	10 U	10 U	1000 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone		μg/L	10 U	1000 U	10 U	10 U	10 U	1.3 J	10 U	1000 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone		μg/L	10 U	1000 U	10 U	10 U	10 U	90	10 U	1000 U	10 U	10 U	10 U	14	10 U	10 U
Benzene	5	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane		μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane ^o	80	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform [®]	80	μg/L	5 U				5 U	5 U	5 U	500 U		5 U	5 U		5 U	5 U
Bromomethane	-	μg/L	5 U	500 U 500 U	5 U 5 U	5 U	5 U	5 UJ	5 U	500 U	5 U	5 U	5 U	5 U	5 UJ	5 U
Carbon Disulfide	<u> </u>	μg/L	5 U				5 U	5 UJ	5 U							
Carbon tetrachloride	5	μg/L		500 U	5 U	5 U				500 U	5 U	5 U	5 U	5 U	5 UJ	5 U
Chlorobenzene	100	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorodibromomethane	80	μg/L	5 U 5 U	500 U 500 U	5 U 5 U	500 U 500 U	5 U	5 U	5 U	5 U	5 U	5 U				
Chloroethane	-	μg/L	5 U				5 U	5 UJ	5 U	500 U	5 U	5 U	5 U		5 UJ	
Chloroform	80	μg/L		500 U	5 U	5 U					5 U			0.91 J		2.3 J
Chloromethane	-	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	μg/L	5 U	500 U	5 U	5 U	5 U	5 UJ	5 U	500 U	5 U	5 U	5 U	5 U	5 UJ	5 U
cis-1,3-Dichloropropene			5 U	120000	5 U	2100	5 U	5 UJ	5 U	18000	5 U	390	3.1 J	86 J-	5 U	6.2
Cyclohexane	-	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	-	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	μg/L	5 U	500 U	5 U	5 U	5 U	5 UJ	5 U	500 U	5 U	5 U	5 U	5 U	5 UJ	5 U
Freon 113		μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
	-	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	-	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl Acetate	-	μg/L	5 U	500 U	5 U	5 U	5 U	23	5 U	500 U	5 U	5 U	5 U	53	5 U	5 U
Methyl tert-butyl ether (MTBE)	-	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane	-	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U

Table 3. Analytical Results, June 2020

OMC Plant 2 Site (OU4) - Waukegan, IL

Olite Flaint 2 Site (004) - Waakegari, IL			MW-607S	MW-607D	MW-610S	MW-610D	MW-612S	MW-612D	MW-613S	MW-613D	MW-614S	MW-614D	MW-615S	MW-615D	MW-619S	MW-619D
Parameter	MCL ^a	Unit	06/03/2020	06/04/2020	06/02/2020	06/02/2020	06/02/2020	06/03/2020	06/03/2020	06/03/2020	06/03/2020	06/03/2020	06/01/2020	06/01/2020	06/03/2020	06/03/2020
Methylene Chloride	5	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	100	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	1,000	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	μg/L	5 U	490 J	0.99 J	4.7 J	5 U	5 UJ	5 U	500 U	5 U	4 J	5 U	4.8 J-	5 U	5 U
trans-1,3-Dichloropropene	-	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethylene	5	μg/L	5 U	18000	21	5 U	5 U	5 U	2.2 J	17000	5 U	17	5 U	8.2	5 U	5 U
Trichlorofluoromethane	-	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Chloride	2	μg/L	5 U	13000	5 U	2100	1.9 J	5 U	5 U	3500	5 U	560	1.2 J	170	5 U	37
Xylene, o ^c	10,000	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Xylenes, m & p ^c	10,000	μg/L	5 U	500 U	5 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U	5 U	5 U	5 U
Dissolved Metals																
Arsenic	10	μg/L	10 U	12.1 J+	10 U	10 U	10.5 J+	16.6 J+	14.8 J+	13 J+	10 U	20.5 J+	16.4 J+	27.9	10 U	10 U
Iron		μg/L	855	1400	100 UJ	5370 J	5390 J	152000	100 U	315	2400 J	464	9390 J	1530 J	100 UJ	611 J
Manganese		μg/L	19.4	7500	4.3 J	80.7	1280	1700	118	253	182	116	560	232	167	17.2
Wet Chemistry																
Ethane		μg/L	5.5 J	1100	10 U	27	450	780 J	10 U	1100	35	4200	78	120 J	10 U	10 U
Ethene		μg/L	3.5 J	7900	10 U	100	23	540 J	10 U	2600	10 U	780	3.9 J	740	10 U	19
Methane		μg/L	1600 ::	12000	10 U	5200	18000	24000 J	240	25000 ::	4100 ::	20000 ::	12000	28000	56	370
Alkalinity, Total (as CaCO3)	-	mg/L	190	420 J	190	360	490	1800	340	500	420	2600	280	1600	71	580
Chloride (CI)	-	mg/L	4.2 U	290	50	160	60	350	9.4 U	220	16 U	260	3.9	350	10 U	180
Nitrate (as N)	-	mg/L	0.05 R	0.05 U	0.2	0.032 J	0.05 R	0.05 R	0.48	0.05 R	0.05 U	0.05 U	0.091 U	0.05 U	0.05 R	0.05 R
Nitrite (as N)	-	mg/L	0.05 R	0.52	0.21	0.37	0.05 R	0.0061 J	0.2	0.05 R	0.17	0.64	0.16	0.05 U	0.05 R	0.05 R
Sulfate	-	mg/L	35	180	140	180	76	1 U	420	440	25	160	28	1 U	79	150
Sulfide	-	mg/L	1 U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.2 U	1.7 U
Total Organic Carbon	-	mg/L	2.4	23 J	1.6	4.2	5.6 J	1200 J	5.1	28	6 J	83	4.4 4.4	200 200	2.1	27

Notes:

J indicates the result is an estimated quantity.

U indicates he analytes was not detected above the reported quantitation limit (QL).

UJ indicates the analyte was not detected above the QL and the QL is approximate

μg/L = micrograms per liter

- = no criteria

Greyed cells indicate detection over the MCL

^a Maximum Contaminant Level (MCL), EPA National Primary Drinking Water Regulations, EPA 816-F-09-004, May 2009

^b MCL is for Total Trihalomethanes, includes the individual trihalomethanes (bromodichloromethane, chlorodibromomethane, chloroform, tribromomethane).

^c MCL is for Total Xylenes, includes m,p-Xylene and o-Xylene; the MCL for total Xylenes was considered an evaluation surrogate.

Table 3. Analytical Results, June 2020

Monitored Natural Attenuation Monitoring - June 2020

			MW-620S	MW-620D	MW-621S	MW-621D	MW-623S	MW-623D	MW-624S	MW-624D	MW-625S	MW-625D	MW-626S	MW-626D	ST-MW-1S	ST-MW-1D	ST-MW-2S	ST-MW-2D
Parameter	MCL ^a	Unit	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/03/2020	06/04/2020	06/04/2020	06/02/2020	06/02/2020	06/03/2020	06/04/2020	06/02/2020	06/02/2020	06/02/2020	06/03/2020
Polychlorinated Biphenyls (PCBs)																		
Aroclor 1016	-	μg/L	-	-	-	-	1 U	1 U	1 U	1 U	-	-	-	-	67 J+	500 U	1 U	1 U
Aroclor 1221	-	μg/L	-	-	-	-	1 U	1 U	1 U	1 U	-	-	-	-	1 U	500 U	1 U	1 U
Aroclor 1232	-	μg/L	-	-	-	-	1 U	1 U	1 U	1 U	-	-	-	-	1 U	500 U	1 U	1 U
Aroclor 1242	-	μg/L	-	-	-	-	0.41 J	1 U	1 U	1 U	-	-	-	-	1 U	500 U	1 U	1 U
Aroclor 1248	-	μg/L	-	-	-	-	1 U	1 U	1 U	1 U	-	-	-	-	1 U	22000	3	0.19 J
Aroclor 1254	-	μg/L	-	-	-	-	1 U	1 U	1 U	1 U	-	-	-	-	1 U	500 U	1 U	1 U
Aroclor 1260	-	μg/L	-	-	_	_	1 U	1 U	1 U	1 U	_	_	-	_	1 U	500 U	1 U	1 U
Aroclor 1262	-	μg/L	-	-	-	-	1 U	1 U	1 U	1 U	-	-	-	-	1 U	500 U	1 U	1 U
Aroclor 1268	-	μg/L	-	-	-	-	1 U	1 U	1 U	1 U	-	-	-	-	1 U	500 U	1 U	1 U
Volatile Organic Compounds							-	-	-	-					-			
1,1,1-Trichloroethane	200	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane		μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2.3 J	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	μg/L	5 U	5 U	5 U	5 UJ	5 UJ	5 U	5 UJ	5 UJ	5 U	100 U	15	5 U	5 U	1.2 J	5 UJ	5 U
1,2,3-Trichlorobenzene	<u> </u>	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromo-3-chloropropane	0.2	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromoethane	0.05	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	600	μg/L		5 U														
1,2-Dichloroethane	5	μg/L	5 U		5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene		μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	- 75	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone		μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
	-	μg/L	10 U	10 U	10 U	24	10 U	10 U	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	-	μg/L	10 U	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U	10 U	10 U					
4-Methyl-2-Pentanone	-	μg/L	10 U	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U	10 U	10 U					
Acetone	-	μg/L	10 U	10 U	10 U	26	10 U	10 U	10 U	10 U	10 U	200 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	8.2	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon tetrachloride	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorodibromomethane ^o	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform ⁵	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	μg/L	5 U	2 J	5 U	5 UJ	5 UJ	5 U	5 UJ	5 UJ	3.8 J	220	940	5 U	5 U	540	13 J-	5 U
cis-1,3-Dichloropropene	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Cyclohexane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	μg/L	5 U	5 U	5 U	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Freon 113	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	-	μg/L	5 U	5 U	5 U	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl Acetate	-	μg/L	1.8 J	5 U	5 U	44	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether (MTBE)	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
		F-07 =	3.0	3.0	J J	3.0	3.0		3.0	3.0	3.0	100 0	3.0	3.0	3.0	3.0	3.0	

Table 3. Analytical Results, June 2020

OMC Plant 2 Site (OU4) - Waukegan, IL

Owie Flam 2 Site (004) Waakegan, it			MW-620S	MW-620D	MW-621S	MW-621D	MW-623S	MW-623D	MW-624S	MW-624D	MW-625S	MW-625D	MW-626S	MW-626D	ST-MW-1S	ST-MW-1D	ST-MW-2S	ST-MW-2D
Parameter	MCL ^a	Unit	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/04/2020	06/03/2020	06/04/2020	06/04/2020	06/02/2020	06/02/2020	06/03/2020	06/04/2020	06/02/2020	06/02/2020	06/02/2020	06/03/2020
Methylene Chloride	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	100	μg/L	5 U	5 U	5 U	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	μg/L	5 U	5 U	5 U	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	1,000	μg/L	5 U	5 U	5 U	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	μg/L	5 U	5 U	5 U	5 UJ	5 UJ	5 U	5 UJ	5 UJ	5 U	100 U	4.2 J	5 U	5 U	6.2	5 UJ	5 U
trans-1,3-Dichloropropene	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethylene	5	μg/L	5 U	0.92 J	5 U	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U	100 U	300	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Chloride	2	μg/L	5 U	7.2	5 U	2.8 J	5 U	1.4 J	5 U	5.4	13	1800	130	4.9 J	0.95 J	2.5 J	5 U	1.2 J
Xylene, o ^c	10,000	μg/L	5 U	5 U	5 U	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Xylenes, m & p ^c	10,000	μg/L	5 U	5 U	5 U	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U
Dissolved Metals																		
Arsenic	10	μg/L	23.8	16.4 J+	12	14.1	62	10 U	7.6 J	931	10 U	10 U	15.9 J+	13.3	10 U	13 J+	10.6 J+	12.9 J+
Iron		μg/L	17300	2980	5240	60700	4780	2340 J	100 U	1920	439 J	1880 J	9260	1960	2920 J	6270 J	4610 J	11700 J
Manganese		μg/L	1570	380	166	1190	437	41.8	156	96.9	182	50.9	1120	35.7	124	72.5	757	243
Wet Chemistry																		
Ethane		μg/L	21	28 J	49	120 J	10 U	10 U	10 U	12	50	36 J	21	3 J	10 U	10 U	10 U	10 U
Ethene		μg/L	2.4 J	7.5 J	55	19000 J	10 U	10 U	10 U	10 U	8.5 J	270 J	15	10 U				
Methane		μg/L	22000	16000 J	14000	15000 J	260 B	250	280	470	17000	650 J	11000	5800	23	550	24	3000 J
Alkalinity, Total (as CaCO3)	-	mg/L	410 J	1800	280 J	1300	270	300	200	340	75	840	340	400	250	380	230	270
Chloride (Cl)	-	mg/L	6.7 U	100	190 J	990	7.5 U	38	2.6 U	300	16 U	180	17	810	4.8 U	480 J+	20	110
Nitrate (as N)	-	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.038 J	0.05 R	0.1	0.9	0.05 U	0.05 U	0.05 R	0.05 U	0.17	0.05 U	0.13	0.05 U
Nitrite (as N)	-	mg/L	0.21	0.38	0.21	0.16	0.13	0.05 R	0.12	0.56	0.11	0.3	0.05 R	0.31	0.18	0.9	0.22	0.28 J+
Sulfate	-	mg/L	250	190	400 J	720	19	46	65	430	64	370	300	1100	380	200 J+	88	47
Sulfide	-	mg/L	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.5 U	1 U	1 U	1 U	1 U
Total Organic Carbon	-	mg/L	4.4 J	37 J	4.4 J	580 J	2.2 J	4.9	1.2 J	5 J	1.9	86	5 J	11 J	4	5.5	3.5	4.8

Notes:

J indicates the result is an estimated quantity.

U indicates he analytes was not detected above the reported quantitation limit (QL).

UJ indicates the analyte was not detected above the QL and the QL is approximate

μg/L = micrograms per liter

- = no criteria

Greyed cells indicate detection over the MCL

^a Maximum Contaminant Level (MCL), EPA National Primary Drinking Water Regulations, EPA 816-F-09-004, May 2009

^b MCL is for Total Trihalomethanes, includes the individual trihalomethanes (bromodichloromethane, chlorodibromomethane, chloroform, tribromomethane).

^c MCL is for Total Xylenes, includes m,p-Xylene and o-Xylene; the MCL for total Xylenes was considered an evaluation surrogate.

Table 3. Analytical Results, June 2020

Owie Frant 2 Site (004) Waakegan, it			ST-MW-3S	ST-MW-3D	ST-MW-4S	ST-MW-4D	ST-MW-5S	ST-MW-5D	W-5
Parameter	MCL ^a	Unit	06/03/2020	06/03/2020	06/04/2020	06/03/2020	06/04/2020	06/04/2020	06/04/2020
Polychlorinated Biphenyls (PCBs)									
Aroclor 1016	-	μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1221	-	μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1232	-	μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1242	-	μg/L	1 U	1 U	0.51 J	1 U	130	0.14 J	1 U
Aroclor 1248	-	μg/L	8.7	0.49 J	1 U	0.3 J	1 U	1 U	1 U
Aroclor 1254	-	μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1260	=	μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1262	=	μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1268	=	μg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Volatile Organic Compounds									
1,1,1-Trichloroethane	200	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	=	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	μg/L	5 U	5 U	5 UJ	5 U	5 U	5 UJ	5 U
1,2,3-Trichlorobenzene	=	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromo-3-chloropropane	0.2	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromoethane	0.05	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	600	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	75	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	-	μg/L	10 U						
2-Hexanone	-	μg/L	10 U						
4-Methyl-2-Pentanone	-	μg/L	10 U						
Acetone	-	μg/L	10 U						
Benzene	5	μg/L	5 U	5 U	5 U	5 U	5.6	58	5 U
Bromochloromethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform ⁵	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	-	μg/L	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	-	μg/L	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U
Carbon tetrachloride	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorodibromomethane ^b	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	=	μg/L	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform ^o	80	μg/L	5 U	5 U	0.98 J	5 U	5 U	5 U	5 U
Chloromethane	-	μg/L	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	μg/L	5 U	5 U	5 UJ	5 U	5 U	5 UJ	5 U
cis-1,3-Dichloropropene	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cyclohexane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	-	μg/L	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	μg/L	5 U	5 U	5 UJ	5 U	3.3 J	5 UJ	5 U
Freon 113	=	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	-	μg/L	5 U	5 U	5 UJ	5 U	10	5 UJ	5 U
Methyl Acetate	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether (MTBE)	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U

Table 3. Analytical Results, June 2020

OMC Plant 2 Site (OU4) - Waukegan, IL

Styrene 100				ST-MW-3S	ST-MW-3D	ST-MW-4S	ST-MW-4D	ST-MW-5S	ST-MW-5D	W-5
Styrene 100	Parameter	MCL ^a	Unit	06/03/2020	06/03/2020	06/04/2020	06/03/2020	06/04/2020	06/04/2020	06/04/2020
Tetrachloroethene	Methylene Chloride	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene 1,000 μg/L 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5	Styrene	100	μg/L	5 U	5 U	5 UJ	5 U	5 U	5 UJ	5 U
trans-1,2-Dichloroethene 100 µg/L 5 U <td>Tetrachloroethene</td> <td>5</td> <td>μg/L</td> <td>5 U</td> <td>5 U</td> <td>5 UJ</td> <td>5 U</td> <td>5 U</td> <td>5 UJ</td> <td>5 U</td>	Tetrachloroethene	5	μg/L	5 U	5 U	5 UJ	5 U	5 U	5 UJ	5 U
trans-1,3-Dichloropropene - µg/L 5 U <td>Toluene</td> <td>1,000</td> <td>μg/L</td> <td>5 U</td> <td>5 U</td> <td>5 UJ</td> <td>5 U</td> <td>5 U</td> <td>5 UJ</td> <td>5 U</td>	Toluene	1,000	μg/L	5 U	5 U	5 UJ	5 U	5 U	5 UJ	5 U
Trichloroethylene 5 μg/L 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5	trans-1,2-Dichloroethene	100	μg/L	5 U	5 U	5 UJ	5 U	5 U	5 UJ	5 U
Trichlorofluoromethane - μg/L 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5	trans-1,3-Dichloropropene	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Chloride 2	Trichloroethylene	5	μg/L	5 U	5 U	5 UJ	5 U	5 U	5 UJ	5 U
Xylene, o	Trichlorofluoromethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Xylenes, m & p° 10,000 μg/L 5 U 5 U 5 U 5 U 0.86 J 5 UJ 5 U 5 U 5 U 0.86 J 5 UJ 5 UJ 5 U 0.86 J 5 UJ 5	Vinyl Chloride	2	μg/L	5 U	5 U	5 U	5 U	5 U	1.1 J	5 U
Dissolved Metals 10	Xylene, o ^c	10,000	μg/L	5 U	5 U	5 UJ	5 U	4.2 J	0.72 J-	5 U
Arsenic 10 µg/L 10.2 J+ 10 U 11.3 12.8 J+ 1040 492 8.8 J 100	Xylenes, m & p ^c	10,000	μg/L	5 U	5 U	5 UJ	5 U	0.86 J	5 UJ	5 U
Iron	Dissolved Metals									
Manganese μg/L 425 495 266 4.7 J 238 50.7 88.4 Wet Chemistry Ethane μg/L 10 U	Arsenic	10	μg/L	10.2 J+	10 U	11.3	12.8 J+	1040	492	8.8 J
Wet Chemistry Ethane μg/L 10 U 10 U 10 U 10 U 10 U 3.5 J 10 U Ethene μg/L 10 U	Iron		μg/L	2320 J	1640 J	2830	100 U	3020	1570	7870
Ethane μg/L 10 U	Manganese		μg/L	425	495	266	4.7 J	238	50.7	88.4
Ethene μg/L 10 U	Wet Chemistry									
Methane μg/L 150 65 260 190 3000 850 60 Alkalinity, Total (as CaCO3) - mg/L 290 320 350 J 200 420 460 J 280 Chloride (Cl) - mg/L 75 200 250 63 62 J+ 200 740 Nitrate (as N) - mg/L 0.05 U 0.05 U 0.045 J 0.31 J 0.05 U 0.05 U 0.15 Nitrite (as N) - mg/L 0.22 0.46 0.48 0.05 R 0.2 0.46 J+ 1.9 Sulfate - mg/L 260 160 160 380 17 92 J- 32 Sulfide - mg/L 1 U </td <td>Ethane</td> <td></td> <td>μg/L</td> <td>10 U</td> <td>10 U</td> <td>10 U</td> <td>10 U</td> <td>10 UJ</td> <td>3.5 J</td> <td>10 U</td>	Ethane		μg/L	10 U	10 U	10 U	10 U	10 UJ	3.5 J	10 U
Alkalinity, Total (as CaCO3) - mg/L 290 320 350 J 200 420 460 J 280 Chloride (Cl) - mg/L 75 200 250 63 62 J+ 200 740 Nitrate (as N) - mg/L 0.05 U 0.05 U 0.045 J 0.31 J 0.05 U 0.05 U 0.15 Nitrite (as N) - mg/L 0.22 0.46 0.48 0.05 R 0.2 0.46 J+ 1.9 Sulfate - mg/L 260 160 160 380 17 92 J- 32 Sulfide - mg/L 1 U 1 U 1 U 1 U 1 U 1 U 1 U	Ethene		μg/L	10 U						
Chloride (CI) - mg/L 75 200 250 63 62 J+ 200 740 Nitrate (as N) - mg/L 0.05 U 0.05 U 0.045 J 0.31 J 0.05 U 0.05 U 0.15 Nitrite (as N) - mg/L 0.22 0.46 0.48 0.05 R 0.2 0.46 J+ 1.9 Sulfate - mg/L 260 160 160 380 17 92 J- 32 Sulfide - mg/L 1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U	Methane		μg/L	150	65	260	190	3000	850	60
Nitrate (as N) - mg/L 0.05 U 0.05 U 0.045 J 0.31 J 0.05 U 0.05 U 0.15 Nitrite (as N) - mg/L 0.22 0.46 0.48 0.05 R 0.2 0.46 J+ 1.9 Sulfate - mg/L 260 160 160 380 17 92 J- 32 Sulfide - mg/L 1 U <td< td=""><td>Alkalinity, Total (as CaCO3)</td><td>-</td><td>mg/L</td><td>290</td><td>320</td><td>350 J</td><td>200</td><td>420</td><td>460 J</td><td>280</td></td<>	Alkalinity, Total (as CaCO3)	-	mg/L	290	320	350 J	200	420	460 J	280
Nitrite (as N) - mg/L 0.22 0.46 0.48 0.05 R 0.2 0.46 J+ 1.9 Sulfate - mg/L 260 160 160 380 17 92 J- 32 Sulfide - mg/L 1 U <td>Chloride (Cl)</td> <td>-</td> <td>mg/L</td> <td>75</td> <td>200</td> <td>250</td> <td>63</td> <td>62 J+</td> <td>200</td> <td>740</td>	Chloride (Cl)	-	mg/L	75	200	250	63	62 J+	200	740
Sulfate - mg/L 260 160 160 380 17 92 J- 32 Sulfide - mg/L 1 U	Nitrate (as N)	-	mg/L	0.05 U	0.05 U	0.045 J	0.31 J	0.05 U	0.05 U	0.15
Sulfide - mg/L 1U 1U 1U 1U 1U 1U 1U 1U	Nitrite (as N)		mg/L	0.22	0.46	0.48	0.05 R	0.2	0.46 J+	1.9
	Sulfate	=	mg/L	260	160	160	380	17	92 J-	32
Total Organic Carbon - mg/L 4.2 2.9 4.2 J 5.5 6.3 J 4.4 J 2.7 J	Sulfide	-	mg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U
	Total Organic Carbon	-	mg/L	4.2	2.9	4.2 J	5.5	6.3 J	4.4 J	2.7 J

Notes:

J indicates the result is an estimated quantity.

U indicates he analytes was not detected above the reported quantitation limit (QL).

UJ indicates the analyte was not detected above the QL and the QL is approximate

μg/L = micrograms per liter

- = no criteria

Greyed cells indicate detection over the MCL



^a Maximum Contaminant Level (MCL), EPA National Primary Drinking Water Regulations, EPA 816-F-09-004, May 2009

^b MCL is for Total Trihalomethanes, includes the individual trihalomethanes (bromodichloromethane, chlorodibromomethane, chloroform, tribromomethane).

^c MCL is for Total Xylenes, includes m,p-Xylene and o-Xylene; the MCL for total Xylenes was considered an evaluation surrogate.

Figures

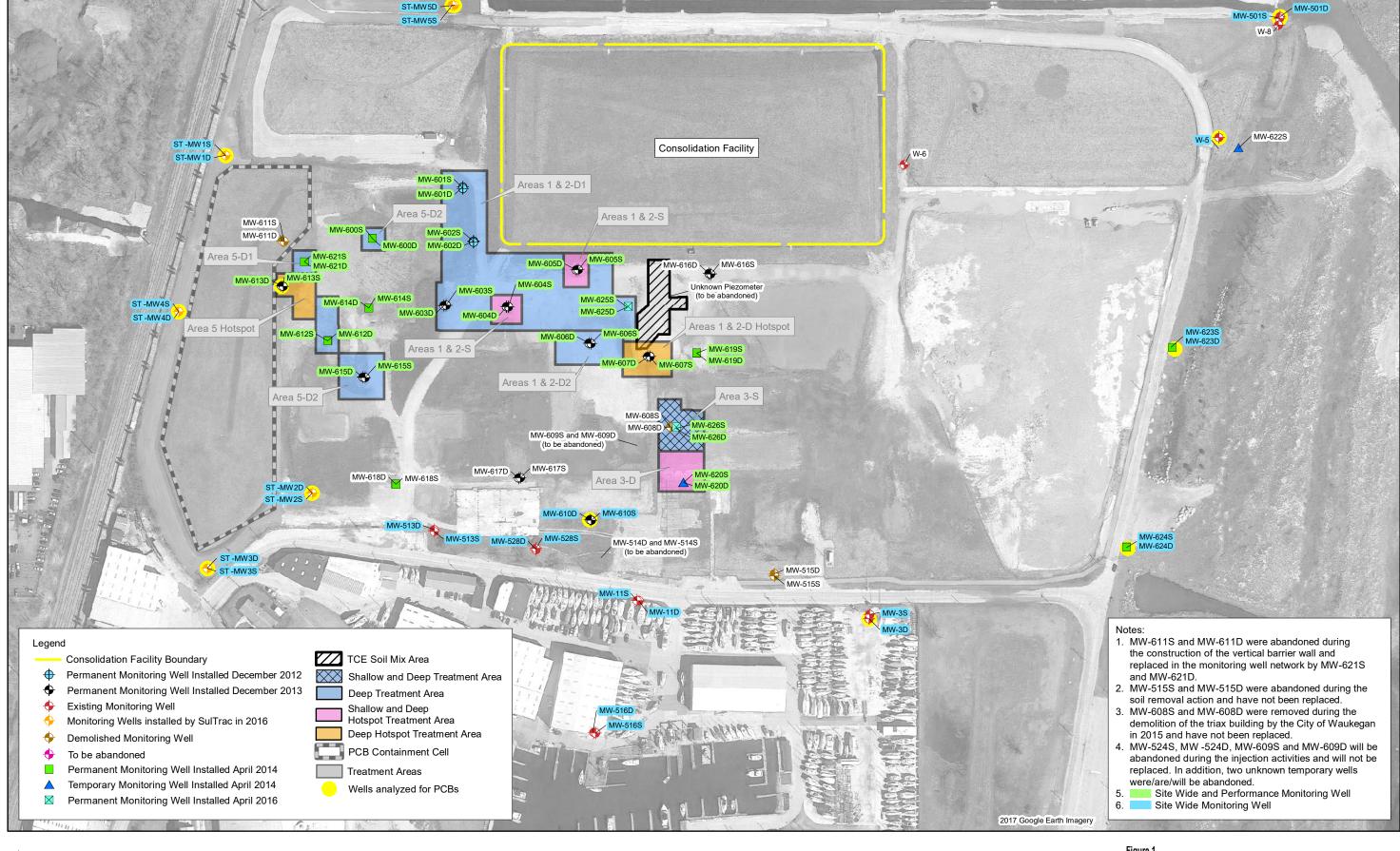
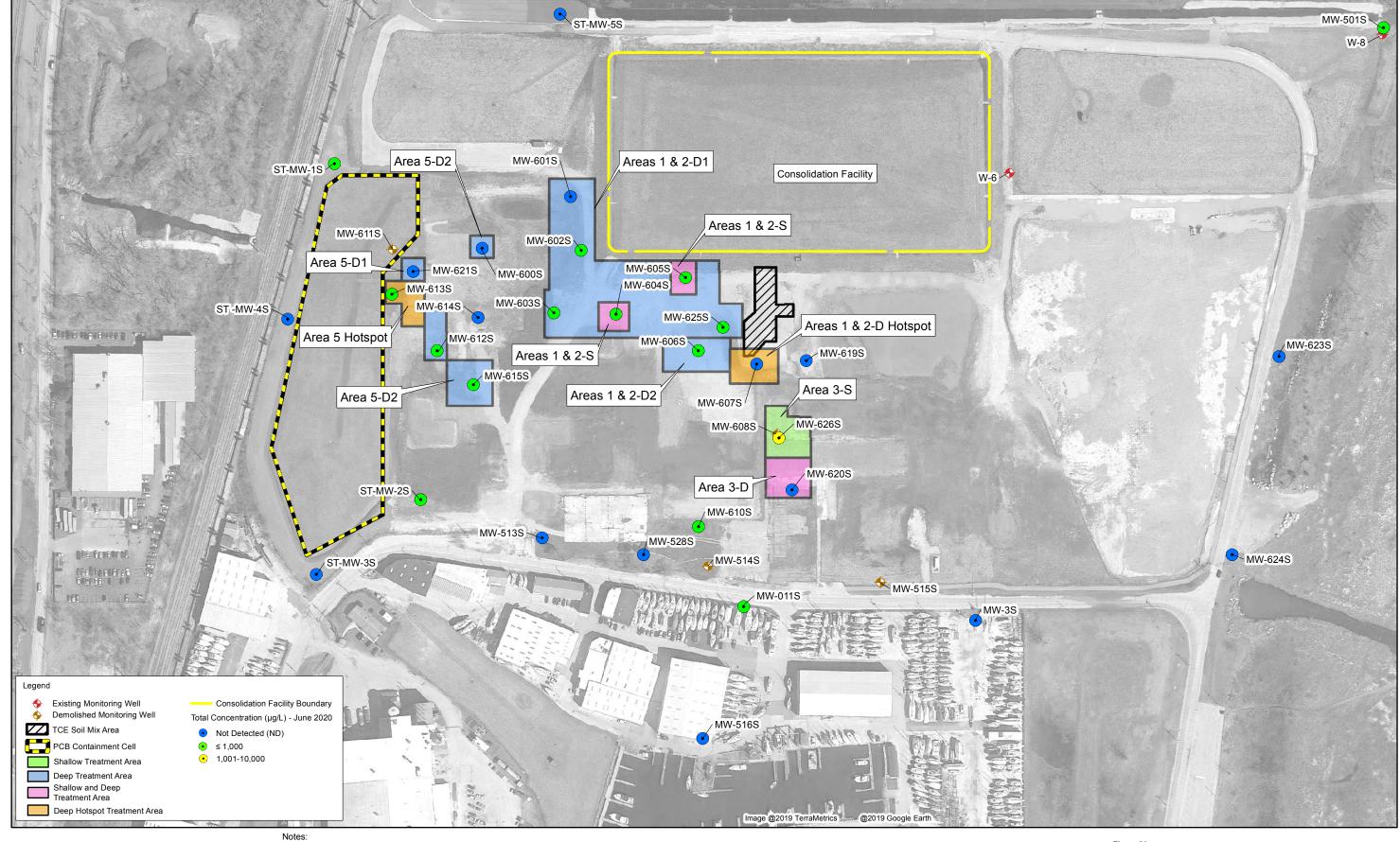
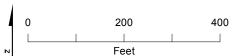


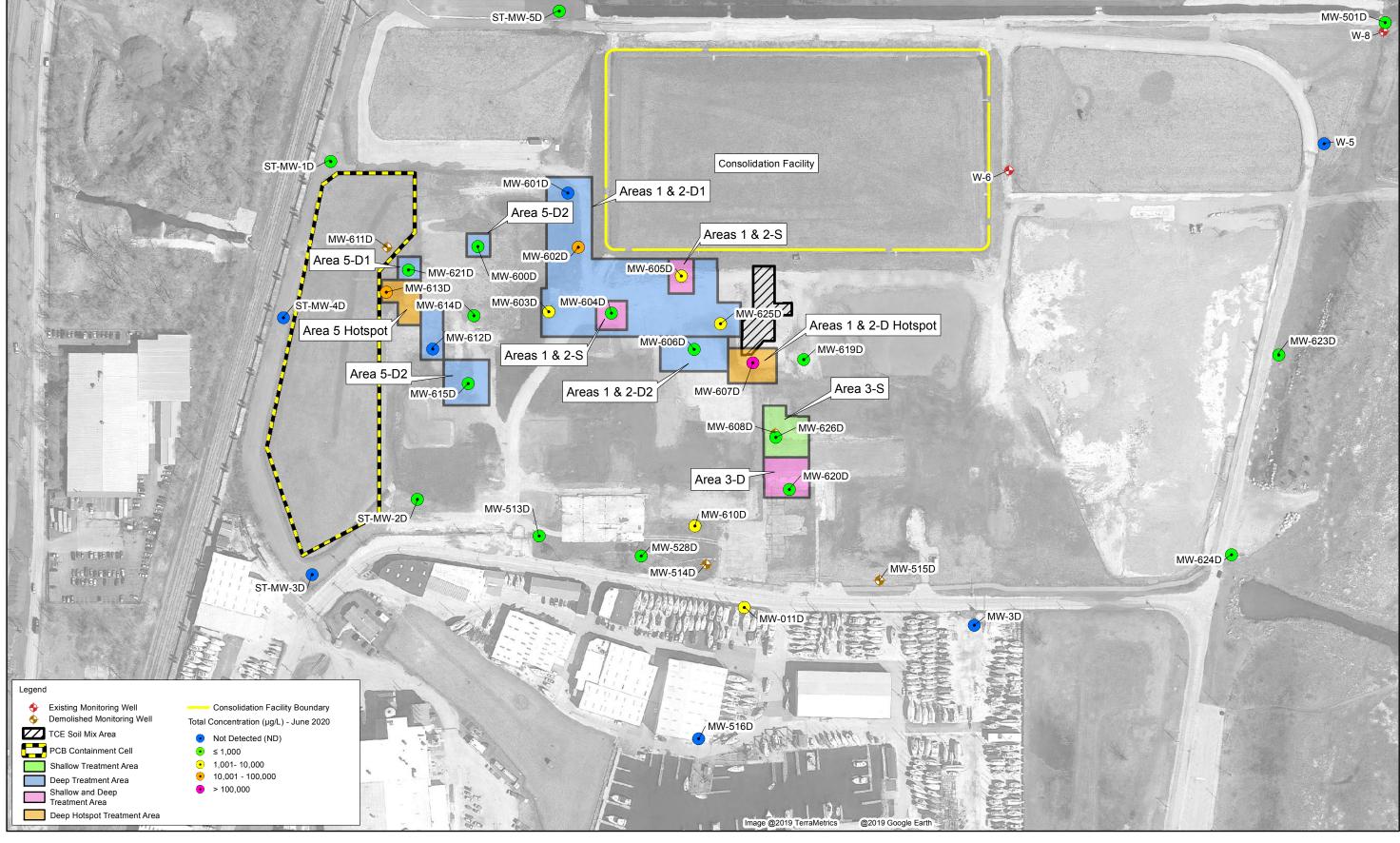
Figure 1
200 400
Monitoring Well and Groundwater Sampling Locations
OMC Plant 2
Feet
Waukegan, IL





- 1. MW-611S and MW-611D were abandoned during the construction of the vertical barrier wall and replaced by MW-621S and MW-621D.
 2. MW-608S was destroyed during the demolition of the triax building in 2015.
 3. This is a first standard consentrations of triple proof the proof of the triangle of triple proof of the triple proof of the triangle of triple proof of the triple proof of triple
- 3. Total VOC concentration is the sum of detected concentrations of trichloroethene, cis-1,2-dichloroethene, and vinyl chloride.

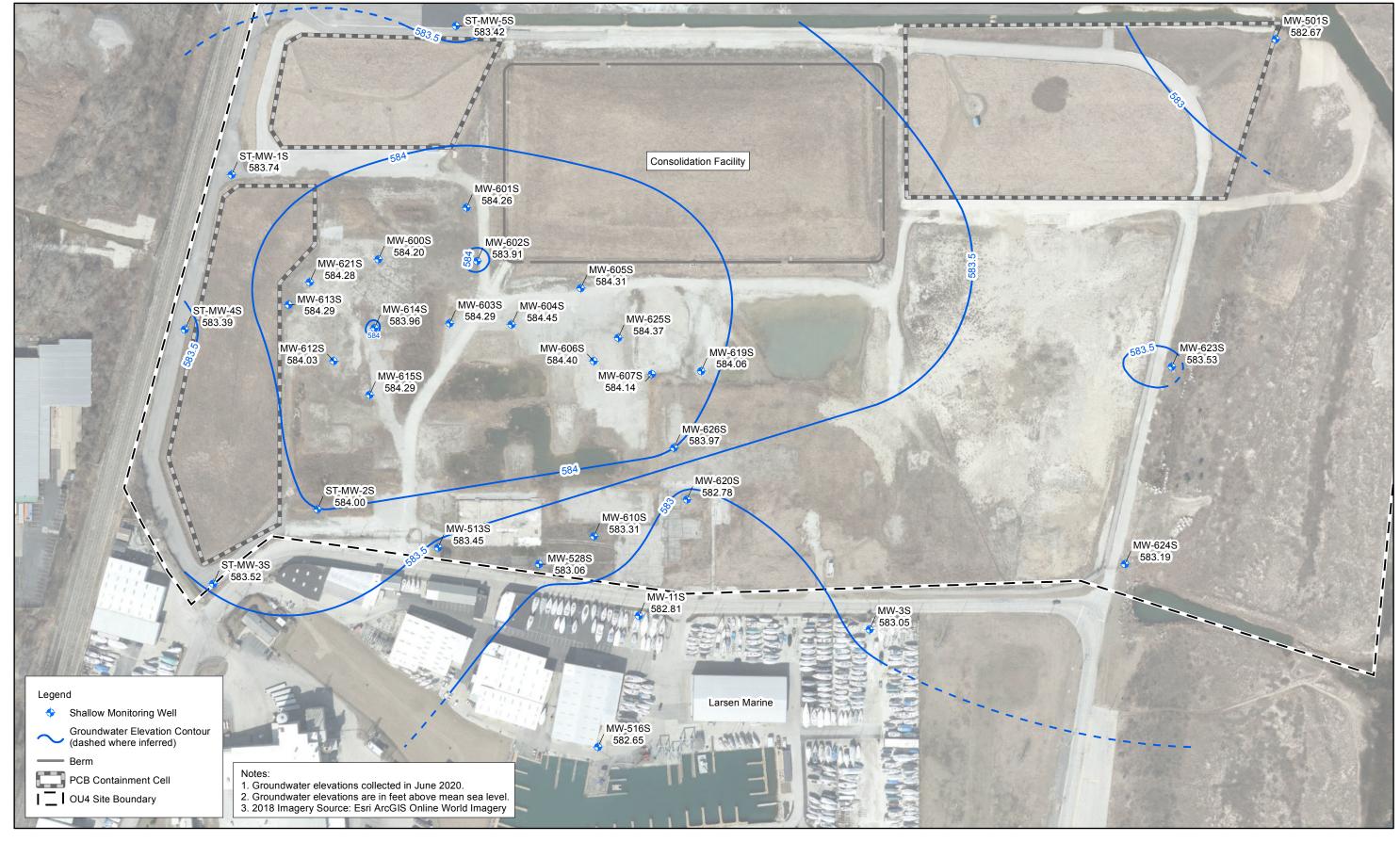
Figure 2A June 2020 Sampling Results - Shallow Wells OMC Plant 2 Waukegan, IL



200 Feet

- MW-611S and MW-611D were abandoned during the construction of the vertical barrier wall and replaced by MW-621S and MW-621D.
 MW-608S and MW-608D were destroyed during the demolition of the triax building in 2015.
 Total VOC concentration is the sum of detected concentrations of chloroethene, cis-1,2-dichloroethene, and vinyl chloride.

Figure 2B June 2020 Sampling Results - Deep Wells OMC Plant 2 Waukegan, IL



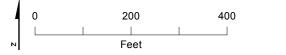
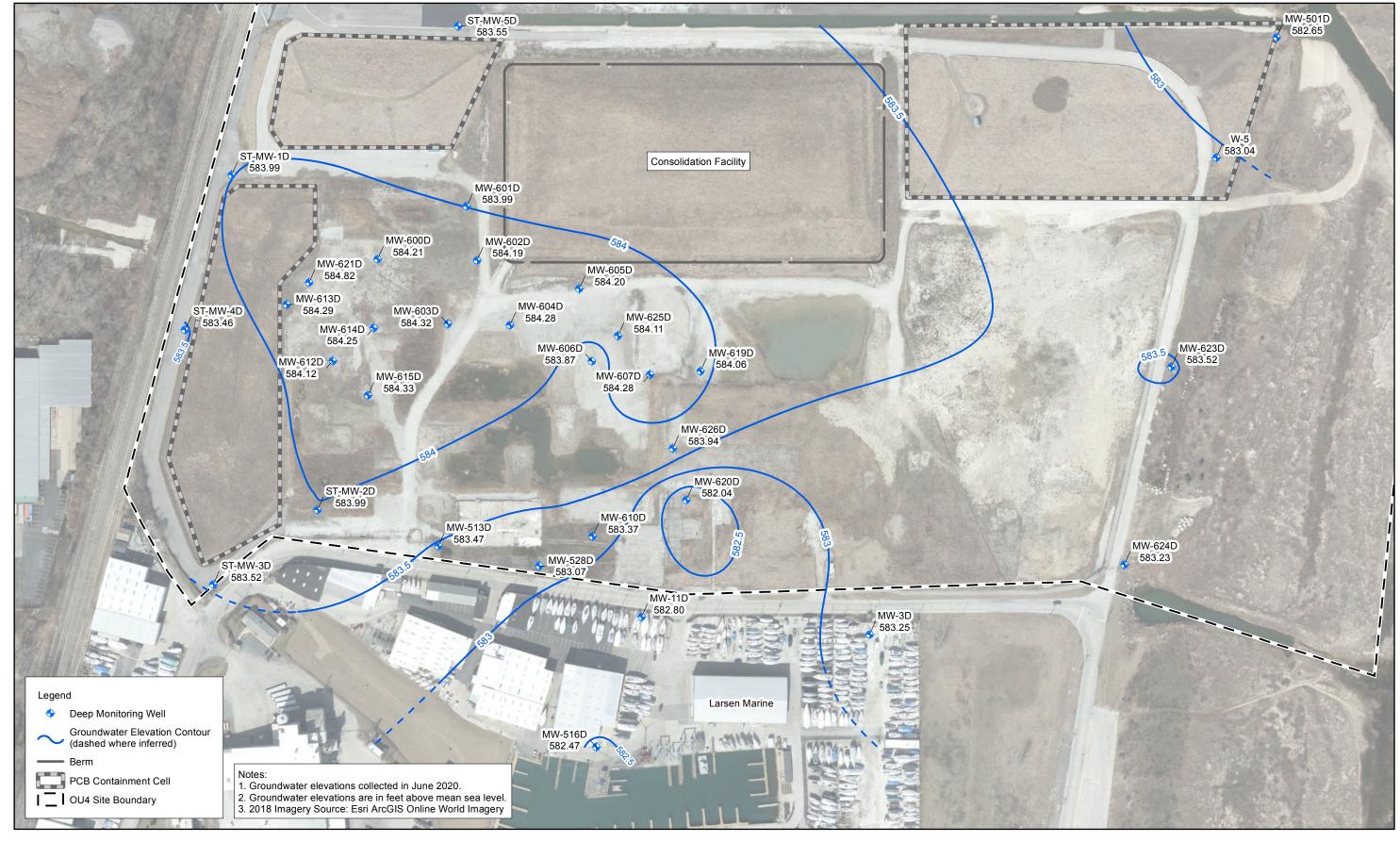


Figure 3A
June 2020 Shallow Potentiometric Surface Map
OMC Plant 2
Waukegan, IL



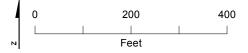


Figure 3B
June 2020 Deep Potentiometric Surface Map
OMC Plant 2
Waukegan, IL

Attachment 1 Groundwater Sampling Forms

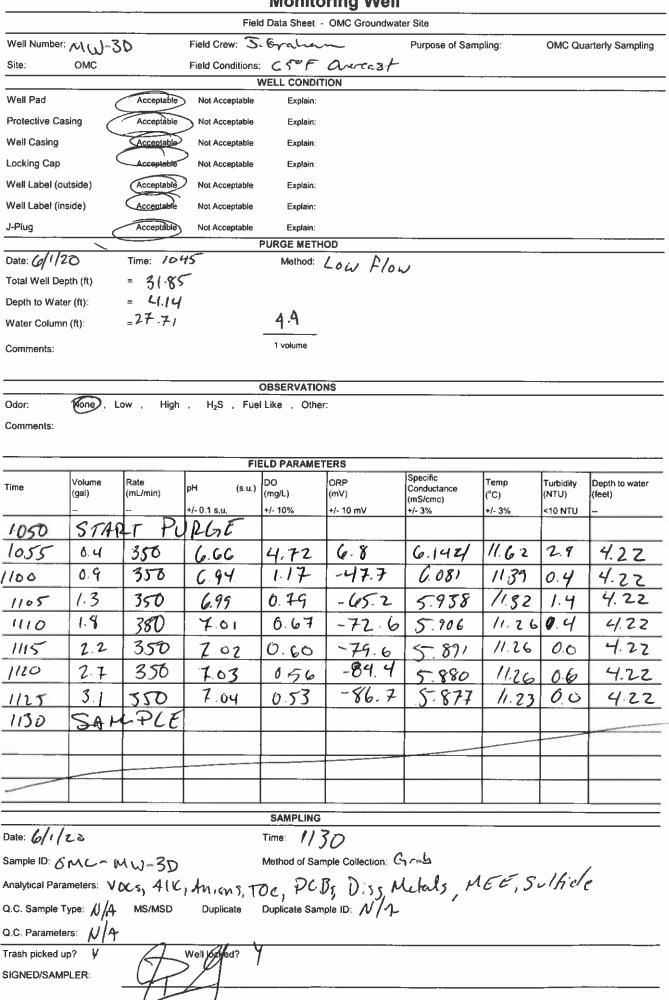
Monitoring Well Field Data Sheet - OMC Groundwater Site Well Number: MW-35 Field Crew: J. Graher an-Purpose of Sampling: **OMC Quarterly Sampling** Field Conditions: 65 F Overcast Site: OMC WELL CONDITION Well Pad Acceptable Not Acceptable Explain **Protective Casing** Acceptable Not Acceptable Explain: Well Casing Acceptable Explain: Not Acceptable Locking Cap Acceptable Not Acceptable Explain: Well Label (outside) cceptable Not Acceptable Explain: Well Label (inside) Acceptable Not Acceptable Explain: J-Plug Acceptable Not Acceptable Explain: **PURGE METHOD** Time: // 55 Method: Low- Flow = 14.84 Total Well Depth (ft) = 4.41 Depth to Water (ft): Water Column (ft): ±10.43 Comments: **OBSERVATIONS** None , Low , High , Odor: H₂S , Fuel Like , Other: Comments: FIELD PARAMETERS Specific ORP Turbidity Volume Rate DO Temp Depth to water Time рΗ (s.u.) Conductance (mL/min) (gal) (mg/L) (mV) (NTU) (°C) (feet) (mS/cmc) +/- 10% +/- 0.1 s,u, +/- 10 mV +/- 3% +/- 3% <10 NTU 1200 PURGE 795 32.0 4.52 1205 250 2.01 0.3 0.419 1.0 11.56 7.44 4.53 26.7 1210 250 6. 97 0 326 02 0.6 11.46 250 7.30 0.75 23.0 4.52 1214 1.0 0.3-02 11.55 1.6 18.8 1220 1.3 250 1.8 4.52 7-32 0.67 0.299 11-64 7.27 16.1 0.299 4.53 1225 11.65 0.0 1.6 0.62 250 0300 2.0 14.4 11.67 00 250 7.28 1230 1235 SAMPLING Date: 6/1/20 Time: 1235 Method of Sample Collection: G na. 5 Sample ID: OMC-MW-35 Analytical Parameters: VOCs, TOC, ALK, Anions, Diss metals, MEE, Schila

Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A-

Q.C. Parameters: N A

Trash picked up?





				Monitor	ing Well				
			Field	Data Sheet - (OMC Groundwater	Site			
Well Number:	MW-11	<i>)</i>		Bron have		Purpose of Sampli	ng:	OMC Quarte	erly Sampling
Site:	ОМС		Field Conditions:						
				ELL CONDITION	<u> </u>				
Nell Pad		Acceptable	Not Acceptable	Explain:					
Protective Casi	^{ng} (Acceptable	Not Acceptable	Explain: Explain:					
Well Casing		Acceptable	Not Acceptable Not Acceptable	Explain:					
Locking Cap	(do)	Acceptable	Not Acceptable	Explain					
Well Label (out: Well Label (insi		Acceptable	Not Acceptable	Explain					
J-Plug	(Acceptable	Not Acceptable	Explain:					
- Indig				PURGE METHO	DD				
Date: C. (1)	10	Time: /50	4	Method:	low-flow				
Total Well Dept		= 13-63							
Depth to Water	(ft):	= 4.22		.5					
Water Column	(ft):	=961							
Comments:				1 volume					
		Llimb		OBSERVATION Like Other:	<u> </u>				
Odor:		w , High							
Comments:	Wate	151	usky o	range					
			FII	ELD PARAMET	ERS				
	Volume	Rate	pH (s.u.)	DO	ORP	Specific Conductance	Temp	Turbidity	Depth to water (feet)
Time	(gal)	(mL/min)	+/- 0.1 s.u,	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/= 3%	(°C) +/- 3%	(NTU) <10 NTU	
1505	50	DRT F							
1510	0.3	250	177	2.62	30.7	1.346	12.85	175.9	4.25
1515	0.6	250	7.42	1.01	16.5	1366	12.18	119.8	4.25
1520	1.0	250	7.34	0.70	-23.5	1329	11.94	536	4.25
	1.3	250	730	0.62	-13.2	1.353	11.89	44.0	4-25
1525	1.6	250	727	0.57		1.388	11.93		
1530		250	727	0.58	-12.4	1.405	11.98	328	4.25
1535	2.0	250	7.27	0.53	-14.7	1.411	12.06	23.4	4.25
		1 / 1()	1 4. 6. 7	1 12 3 3			1 . 2. 00	- J	
1540	2.3		''-	U 113 5					
1545	SAM		V.	0,13					
				SAMPLING					
1545	SAM								
1545 Date: 4(1/	SAM	PLE		SAMPLING		grab			
1545 Date: ((1/ Sample ID: ()	20 MC-10	PLE AW-11	5	SAMPLING Time: / 7	nple Collection:	grab			
1545 Date: ((1/ Sample ID: ()	20 MC-10	PLE AW-11	5	SAMPLING Time: / 7	nple Collection:	grab			
Date: Q(I/Sample ID: CAnalytical Para	SAM 20 MC - M ameters: V Type: N/A	PLE AW-11	5	SAMPLING Time: / 7	nple Collection:				
Date: C(1/ Sample ID: C Analytical Para Q.C. Sample 1 Q.C. Paramete	SAM 20 MC - M ameters: V A ers: N A	PLE AW-11	Solfide,	SAMPLING Time: 170 Method of Sar ALL, An I on Duplicate San	nple Collection:	grab			
Date: Q(I/Sample ID: CAnalytical Para	SAM 20 MC - M Type: N/A ers: N/A up? 4	PLE AW-11	5	SAMPLING Time: 170 Method of Sar ALL, An I on Duplicate San	nple Collection:	grab			

			Fiel	d Data Sheet -	OMC Groundwat	er Site			
Well Number:	MW-1	D	_	Gralin		Purpose of Samp	oling:	OMC Qua	rterly Sampling
Site:	OMC		Field Conditions:						
Mall Book		Acceptable		WELL CONDIT	ION				
Well Pad Protective Cas	ina (Acceptable	Not Acceptable Not Acceptable	Explain: Explain:					
Well Casing	""g (Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:	-4				
Well Label (out	tside)	Acceptable	Not Acceptable	Explain:					
Well Label (ins	•	Acceptable	Not Acceptable	Explain:					
J-Plug	,	Acceptable	Not Acceptable	Explain:					
				PURGE METH	OD				
Date: 6/1/2	Ò	Time: (3)		Method:	low-flow				
Total Well Dep		= 50 6.	t				× .		
Depth to Water		= 4.21		4.2					
Water Column	(rt):	2 6.46							
Comments:				1 volume					
				OBSERVATIO	NS				
Odor:	None , Z	W , High		Like , Other					
Comments:									
	1		FI	ELD PARAMET	TERS	Spanific		Ol _{or}	1
ime	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
		**	+/- 0.1 s,u,	+/- 10%	+/- 10 mV	(mS/cmc) +/- 3%	+/- 3%	<10 NTU	
1325	STAP	- Pur	-GE			1	ļ		
1330	6.4	300	7.41	2.65	-102.5	1.333	12.37		4.30
1335	0.4	300	7.29	096	-115.0	1.338	11.82	7.9	4.30
1340	1.2	300	7.31	0:21	-119.5	1.476	11.59	3.4	4.31
1345	1.6	300	7.37	0.64	-172.0	1.456	71.50	3.8	4.31
1350	2.0	300	7.32	059	-123.4	1.485	11.64	5.7	4.51
1355	24	300	¥.3)	6.55	-1244	1,524	11.61	8.2	4.31
1400	2.8	300	7.34	0.5-2	-1271	1.522	11.60	6.9	4.3)
1405		IRCE	,	, ,	7.7.	1	00		
· ·- /	0140	The Ce							
35									-
							C#		-
		<u> </u>		<u> </u>					<u> </u>
				SAMPLING					
Date: 🖒 [1]					5				
Sample ID: 🎮	MC-M	W-11D	0011.1.	Method of San	nple Collection:	grab	MILP		
		003,700	1501000	AIB, M	/0/1/ //LC	70, 11.35/	-upurs	_	
Analytical Para		MS/MSD (Duplicate	Duplicate Sam	ple ID: OM(1-mm-11	240	(A)	,1410
Analytical Para									
Analytical Paradoc. Sample Ty	rs: SAM	EAS F	PARENT						
Analytical Parad Q.C. Sample Ty Q.C. Parameter			Well locked? Y						
Analytical Parad Q.C. Sample Ty	o? 4						1		

					OMC Groundwater				
	MW-501	<u></u>	Field Crew: Mali			Purpose of Samplin	ng: (OMC Quarte	erly Sampling
			Field Conditions:	1768166	F, 720F		-		
ite:	OMC			ELL CONDIT					
Veil Pad		Acceptable	(Not Acceptable	Explain:	NIA				
rotective Casi	ng	Acceptable	Not Acceptable	Explain:					
Vell Casing		Acceptable	Not Acceptable	Explain:					
ocking Cap		Acceptable	Not Acceptable	Explain:	NA				
Vell Label (out	side)	Acceptable	Not Acceptable	Explain:	Ust present	-			
Vell Label (insi		Acceptable	Not Acceptable	Explain:	Nat present Nat present Nat present	ı			
I-Plug		Acceptable	Not Acceptable	Explain:	Not present	<u> </u>			
				URGE METH					
Date: 06/0	3/20	Time: 167		Method:	low-flow				
Total Well Dep	th (ft)	3-15	-						
Depth to Water		= 7.05		[.]					
Water Column	(ft):	= 7 7	-	1 volume					
Comments:				1 Volume					
				DBSERVATION	ONS				
Odor:	None Lo	ow , High							
Comments	(/								
Comments	Dea	seich	prige voa	ter					
			FIE	LD PARAME	TERS	Specific			D sh. to surator
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Conductance (mS/cmc)	Temp (°C) +/- 3%	Turbidity (NTU) <10 NT <u>U</u>	Depth to water (feet)
		000	+/- 0.1 s,u,	1.84	+/- 10 mV -10Z	0.555	14.68	775	3.21
1029	0-(280	7.55		1-76.(0.500	14.4	28.2	- 3.15
1033	8-3	280	7.10	0.81	-79.1	0.486	14.68	8.8	3.15
1038	0.7	280	7.12	057	-85.3	6.479	 	6.6	3.15
1043	1.	280	7.22	0.51			14.17		3.15
1048	1.5	280	7.27	0.45	-88.8	6-474	19.00	77-1	7-10
			l	<u> </u>				 	├ ──
			nl	_		<u> </u>	<u> </u>	ļ	<u> </u>
							<u> </u>	<u> </u>	<u> </u>
	+						Ì		<u> </u>
		+	 				T		
		+	 	 					
		 -	 	 		 	†		
				SAMPLII					
	103/20		_						
Sample ID:	0MC-1	14-5019	5		Sample Collection:	grab			
Analytical Pa	rameters:	VOC, MN	A, DES HO	tals, PC	135				
Q.C. Sample		MS/MSD		Duplicate S					
Q.C. Parame	eters:								
Trash picked		>	Well locked?	les n	1				
SIGNED/SA			Well locked?	Lell.	,			_	

					ring Well	. 0%			
			Fie	ld Data Sheet -	OMC Groundwate	er Site			
Well Numbe	r Mw~ °	5010	Field Crew: N			Purpose of Samp	ling:	OMC Qua	rterly Sampling
Site:	ОМС		Field Conditions:						
				WELL CONDIT					300
Well Pad		Acceptable	Not Acceptable	Explain:	MA				
Protective C	asing	Acceptable	Not Acceptable	Explain:					0
Well Casing		Acceptable	Not Acceptable	Explain:	A				
Locking Cap	•	Acceptable	Not Acceptable	Explain:		1		3	
Well Label (outside)	Acceptable	Not Acceptable	Explain:	Not present				8 51
Well Label (i	nside)	Acceptable	Not Acceptable	Explain:	had present	1			
J-Plug		Acceptable	Not Acceptable			nt w			
D-1 (1)	1.01-	Time 1 =		PURGE METH	- 4				
Date: () (o		Time: 12	23	Method:	low-flow				
Total Well D		- ()	and the second s						
Depth to Wa	ter (ft):	= 2.9	w	45					
Water Colun	nn (ft):	= 28.7	20	7.0					
Comments:				1 volume					
A STATE OF THE STA									
Odor:	None L	ow , High	H₂S Fuel	OBSERVATIO	NS				
	None L	ow , High		Like , Other:					
				Like , Other:	TERS	Specific	Темп	Turbidity	Denth to water
Odor: Comments:	Volume (gal)	ow , High		Like , Other:		Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
Comments:	Volume (gal)	Rate (mL/min)	pH (s.u.)	ELD PARAME DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Conductance (mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
Comments:	Volume	Rate (mL/min) -	pH (s.u.)	ELD PARAME DO (mg/L) +/- 10%	TERS ORP (mV)	Conductance (mS/cmc) +/- 3%	(°C)	(NTU)	(feet) - Z-96
Comments:	Volume (gal)	Rate (mL/min)	pH (s.u.)	ELD PARAME DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Conductance (mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
Comments:	Volume (gal)	Rate (mL/min) -	pH (s.u.) +/- 0.1 s,u,	ELD PARAME DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Conductance (mS/cmc) +/- 3%	(°C) +/- 3% 13,65	(NTU) <10 NTU 4).9	(feet) - Z-96
Comments: Time 227 1212	Volume (gal)	Rate (mL/min) - 300 300	PH (s.u.) +/-0.1 s.u. 7-65 7-56	ELD PARAME DO (mg/L) +/- 10% 2-5% D - 97 D - 572	ORP (mV) +/-10 mV -(27.1) -(38)	Conductance (mS/cmc) +/-3% 0.590 0.592	(°C) +1-3% 13.65 13.37	(NTU) <10 NTU 47.9 11.3	2.96 2.96 2.96
Comments: Time 207 1212 1217 1222	Volume (gal)	Rate (mL/min) - 350 350 350 350	FI pH (s.u.) +/-0.1 s.u, 7-65 7-56 7-59	ELD PARAME DO (mg/L) +/- 10% 2-5% D - 97 D - 36	ORP (mV) +10 mV -(27.1) -138 -144.7 -145.7	Conductance (mS/cmc) +/- 3% 6 . 5 9 0 0 . 5 9 2 0 . 5 9 5 6 . 5 9 8	(°C) +1.3% 13.65 13.37 13.39	(NTU) <10 NTU 47.9 11.3 7.3 5.9	2.96 2.96 2.96 2.96
Comments: Time 207 2 2 2 7 222 127	Volume (gat) 	Rate (mL/min) - 350 350 350 350 350 350 350	PH (s.u.) +/-0.1 s.u. 7-65 7-56 7-59 7-57	ELD PARAME DO (mg/L) +/- 10% 2-59 D.52 0-36 0-28	ORP (mV) +10 mV -(27.1 -138 -144.7 -145.7	Conductance (mS/cmc) +/-3%	(°C) 13.65 13.37 13.39 13.27 13.45	(NTU) (10 NTU 41.9 11.3 7.3 5.9 3.2	7.96 2.96 2.96 2.96 2.96
Comments: Time 207 2 2 7 7	Volume (gal)	Rate (mL/min) - 350 360 360 360 360 360	FI pH (s.u.) +/-0.1 s.u. 7.65 7.56 7.59 7.57 1.57	ELD PARAME DO (mg/L) 1/- 10% 2-58 D-36 O-28 6-26	ORP (mV) +/-10 mV -(27.1) -(38) -(44.7) -(45.7) =(47.5) = (46.4)	Conductance (mS/cmc) +/-3%	(°C) +1.3% 13.65 13.37 13.39 13.22 13.45	(NTU) <10 NTU 41.8 7.3 7.3 5.9 2.3	7.96 2.96 2.96 2.96 2.96 2.96
Comments: Time 207	Volume (gal)	Rate (mL/min) - 350 350 350 350 350 350 350	PH (s.u.) +/-0.1 s.u. 7-65 7-56 7-59 7-57	ELD PARAME DO (mg/L) +/- 10% 2-59 D.52 0-36 0-28	ORP (mV) +10 mV -(27.1 -138 -144.7 -145.7	Conductance (mS/cmc) +/-3%	(°C) 13.65 13.37 13.39 13.27 13.45	(NTU) (10 NTU 41.9 11.3 7.3 5.9 3.2	2.96 2.96 2.96 2.96
Comments: Time 207 1212 1217 1222 127 1232	Volume (gal)	Rate (mL/min) - 350 360 360 360 360 360	FI pH (s.u.) +/-0.1 s.u. 7.65 7.56 7.59 7.57 1.57	ELD PARAME DO (mg/L) 1/- 10% 2-58 D-36 O-28 6-26	ORP (mV) +/-10 mV -(27.1) -(38) -(44.7) -(45.7) =(47.5) = (46.4)	Conductance (mS/cmc) +/-3%	(°C) +1.3% 13.65 13.37 13.39 13.22 13.45	(NTU) <10 NTU 41.8 7.3 7.3 5.9 2.3	7.96 2.96 2.96 2.96 2.96 2.96
Comments: Time 207 2 2 7 7	Volume (gal)	Rate (mL/min) - 350 360 360 360 360 360	FI pH (s.u.) +/-0.1 s.u. 7.65 7.56 7.59 7.57 1.57	ELD PARAME DO (mg/L) 1/- 10% 2-58 D-36 O-28 6-26	ORP (mV) +/-10 mV -(27.1) -(38) -(44.7) -(45.7) =(47.5) = (46.4)	Conductance (mS/cmc) +/-3%	(°C) +1.3% 13.65 13.37 13.39 13.22 13.45	(NTU) <10 NTU 41.8 7.3 7.3 5.9 2.3	7.96 2.96 2.96 2.96 2.96 2.96
Comments: Time 207 2 2 7 7	Volume (gal)	Rate (mL/min) - 350 360 360 360 360 360	FI pH (s.u.) +/-0.1 s.u. 7.65 7.56 7.59 7.57 1.57	ELD PARAME DO (mg/L) 1/- 10% 2-58 D-36 O-28 6-26	ORP (mV) +/-10 mV -(27.1) -(38) -(44.7) -(45.7) =(47.5) = (46.4)	Conductance (mS/cmc) +/-3%	(°C) +1.3% 13.65 13.37 13.39 13.22 13.45	(NTU) <10 NTU 41.8 7.3 7.3 5.9 2.3	7.96 2.96 2.96 2.96 2.96 2.96
Comments: Time 207 2 2 7	Volume (gal)	Rate (mL/min) - 350 360 360 360 360 360	FI pH (s.u.) +/-0.1 s.u. 7.65 7.56 7.59 7.57 1.57	ELD PARAME DO (mg/L) 1/- 10% 2-58 D-36 O-28 6-26	ORP (mV) +/-10 mV -(27.1) -(38) -(44.7) -(45.7) =(47.5) = (46.4)	Conductance (mS/cmc) +/-3%	(°C) +1.3% 13.65 13.37 13.39 13.22 13.45	(NTU) <10 NTU 41.8 7.3 7.3 5.9 2.3	7.96 2.96 2.96 2.96 2.96 2.96
Comments: Time 207 1212 1217 1222 127 1232	Volume (gal)	Rate (mL/min) - 350 360 360 360 360 360	FI pH (s.u.) +/-0.1 s.u. 7.65 7.56 7.59 7.57 1.57	ELD PARAME DO (mg/L) 1/- 10% 2-58 D-36 O-28 6-26	ORP (mV) +/-10 mV -(27.1) -(38) -(44.7) -(45.7) =(47.5) = (46.4)	Conductance (mS/cmc) +/-3%	(°C) +1.3% 13.65 13.37 13.39 13.22 13.45	(NTU) <10 NTU 41.8 7.3 7.3 5.9 2.3	7.96 2.96 2.96 2.96 2.96 2.96

SAMPLING

Date: 06/03/20

Time: 12 45

Sample ID: 6M C = MW - 50 10

Method of Sample Collection: grab

Analytical Parameters: 40C, MMA, Di35 McHals, CGS

Q.C. Sample Type: MS/MSD Duplicate Duplicate Sample ID:

Q.C. Parameters:

Trash picked up?

Well Jocked? 165

				_ivionite	oring Well	<u> </u>			
				-	- OMC Groundwa	ter Site			
Well Number:	MW-5	135	Field Crew:	Vlatt 6.		Purpose of Sam	pling:	OMC Qu	arterly Sampling
Site:	ОМС		Field Conditions		st, 76°F				
Well Pad		Acceptable	Not Acceptable	WELL CONDI	TION	-			-
Protective Cas	eina	Acceptable	Not Acceptable	Explain:					
Well Casing	ang	Acceptable	Not Acceptable	Explain: Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (ou	ıtside)	Acceptable	Not Acceptable	Explain:	Not orce	, +			
Well Label (ins	- 48	Acceptable	Not Acceptable	Explain:	Not prox				
J-Plug	,	Acceptable	Not Acceptable	Explain:	011 3 901	^3			
			•	PURGE METH	IOD				
Date: 06	101120		50	Method:	low-flow				
Total Well Dep	oth (ft)	= 6.	-						
Depth to Wate	er (ft):	= 1-7		- 0/					
Water Column	(ft):	= 5.1	8	0.8					
Comments:				1 volume					
Odoe	Alona	15-4		OBSERVATIO	NS				
Odor:	(None) Lo	ow , High	H₂S , Fuel	Like , Other:					
Comments:									
			Fil	ELD PARAME	TERS				
Time	Volume	Rate	pH (s.u.)	DQ	ORP	Specific Conductance	Temp	Turbidity	Depth to water
	(gal)	(mL/min)	+/- 0.1 s,u,	(mg/L) +/10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
1254	0-1	300	6.95	2.69	174.5	0.705	11.87	5-4	1.78
1259	0.4	300	7.10	2.05	154.2	0.660	11.80	3.6	1.79
1304	1.0	300	7,18	2.08	144.3	6.651	11,96	6.0	1.78
1309	1.5	300	7.19	2.32	138.9	0.642	(1.86		1.78
1314	2.0	300	7.21		1			0	' -
	1	-			134.8	0-635	11.78		1.79
1319	2.5	300	7.24	2.50	131.3	0-631	11.87	0.0	i.78
								-	
				***				7.	
				SAMPLING	<u> </u>				l
Date: 🖒 6	101/20		-	Time: 137	25				
Sample ID: (W-5139		Method of Sam		grab			
			1 DIGG. M.		pro consolion.	Aigh			
		-			=				
.C. Sample Ty		MS/MSD	Duplicate	Duplicate Sam	ole ID:				
C. Parameter		<u>.</u>							
rash picked up	- /	2/1	Well locked? Kes	9/1					
IGNED/SAMPI	LER:	Ma	all Hen	lade					

		<u>.</u>		WOTING	ring wen				
		- 40		11 11 /	OMC Groundwat	er Site			
Well Number:	, -	130		Mett G	1 7/05	Purpose of Sam	pling:	OMC Qua	arterly Sampling
Site:	OMC		Field Conditions		st, 76°F				
Well Pad		Acceptable	Not Acceptable	WELL CONDIT	ION				
Protective Cas	sina	Acceptable	Not Acceptable	•					
Well Casing	W.	Acceptable	Not Acceptable	·					
Locking Cap		Acceptable	Not Acceptable	·					
Well Label (ou	ıtside)	Acceptable	Not Acceptable		Not prese	at			
Well Label (ins	,	Acceptable	Not Acceptable	Explain:	Not prese	ent			
J-Plug	•	Acceptable	Not Acceptable	رــــــ :Explain	7-61 7:1-1	,			
				PURGE METH	OD				
Date: 06	0120		52	Method:	low-flow				
Total Well Dep	oth (ft)	= 23							
Depth to Wate	r (ft):	= 1.72							
Water Column	(ft):	= 21,5	5	34					
Comments:				1 volume					
			_	Ų.					
				OBSERVATIO	NS				
Odor:		ow , High.		Like , Other:					
Comments:	Ocang	e purge	water	at divs	-				
		ī	F	IELD PARAMET	TERS	Tennife.		T	
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%	Turbidity (NTU) <10 NTU	Depth to water (feet)
1358	0:1	160	7.43	1.44	-44.2	1.125	12.85	19.2	1.85
1403	0.3	300	7.37	0.87	-31.7	1.100	12.30	0.0	1.90
1408	0.6	300	7.34	0.66	- 37-6	1-107	12.14	0-0	1.90
1413	11	300	7.32	6.47	-55.4	1.150	11.06	0.0	1.90
1418	1.7	300	7.32	0.46	72.9	†	 '		1.90
1423		300		0.34	-70	1.168	11.74	1	
	2.2		7.32			レノフリ	11.79	0.6	1.90
1428	2.5	300		0.30	- 84.4	1,177	11.70		1.98
1433	2.7	360	7-33	6.33	285.3	1.178	11.87		1.98
1438	3.0	300	7.33	0.33	-84.1	1.181	11.90	0.6	1.00
		<u> </u>			5				
				SAMPLING	-		 		•
Date: ()(s	101 (20			Time: Լվլվ	٥				-
Sample ID:	م الم	NW-513	BD	Method of Sam	-	grab			
			NUA, Dis		5.0				
Q.C. Sample Ty		MS/MSD	Duplicate	Duplicate Samp					
2.C. Parameter	•		Sahusate	Suprome Gallij	ord flat.				
rash picked up			Well locked?	RES 11					**
IGNED/SAMP		9	Well locked?	7//					

				Monito	oring well				
			Fiel	d Data Sheet	- OMC Groundwate	er Site			
Well Number.	MW-S	165	Field Crew: 3	Greh	en	Purpose of Samp	oling:	OMC Qua	arterly Sampling
Site:	OMC		Field Conditions.	76"F	Sunny	winds			
			-	WELL CONDIT	ION				
Well Pad	(Acceptable) Not Acceptable	Explain					
Protective Ca	sing (Acceptable	Not Acceptable	Explain:					
Well Casing	~	Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (or	itside)	Acceptable (Not Acceptable) Explain:	dones	Then			
Well Label (in	side) (Acceptable	Not Acceptable	Explain					
J-Plug		Acceptable	Not Acceptable	Explain					
Date: 6/2	/	Time: 09		PURGE METH					
Total Well De		= 8.22	_	Method:	low-flow				
·		•							
Depth to Wate	1.52	= 0.97		1.2					
Water Column	(0)	= 7.29	7						
Comments:				1 volume					
				ABAES	110				
Odor:	None Lo	ow 🖟 High		OBSERVATIO Like Other:	· S	_			
Comments	1,10,10		. 150 , 1461	Line , Other.					
Comments.									
			FII	ELD PARAME	TERS				
Time	Volume	Rate	8	DO	ORP	Specific	Temp	Turbidity	Depth to water
Time	(gai)	(mL/min)		(mg/L)	(mV)	(mS/cmc)	(°C)	(NTU)	(feet)
0955	C2-	FRT PU	+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	
	1/10	350	707	1.27	014	0.842	1777	42	1.00
1000			7.07		31.4		1772		+
1005		380	6.92	0.84	279	0825	1826	0.7	1.00
1010		350	6.90	0.64	28.3	0.869	18.32	0.1	100
1015		350	6.89	0.59	277	0.874	18.36	0.3	1.00
1020		550	6-89	0.53	200	0.819	18.33	1.7	100
1025		350	6.89	0.49	23.6	0.879	18.40		1.00
1030	50	russi	هم						
		, 5 - 1 (5 (<u> </u>						
	<u> </u>					<u> </u>			
	 								
					<u> </u>		9		
				SAMPLING					
Date: <i>G(</i> て/	20			Time: 10	<u> </u>				
Sample ID: $ ot\!\! p$	MC-ML	U2 516.6	ζ.	Method of San	nple Collection:	grab			
Analytical Para	meters: U	OCa from	AlV L			's wer	5 10.1		
O.C. Sample T	voe N/A	MS/MSD	Dunlicate .	Dunlicate Sam	PISS Metansple ID: N/A	- WILL	DUHO		
Q.C. Paramete		MONVIOL	Dupiroste	Cabildate agui	PIGIO. JUJAJ-				
			AL-111- 1- 1- 1						
Trash picked u	•	(d	Well locked? イ						
SIGNED/SAMF	'LER:	X	-						
		11							
			\ /						

Field Data Sheet - OMC Groundwater Site Well Number: MW - 576D Field Crew: Purpose of Sampling OMC Quarterly Sampling Site: **Field Conditions** Windy WELL CONDITION Well Pad Not Acceptable Explain **Protective Casing** Not Acceptable Explain: Well Casing Not Acceptable Explain: Locking Cap Acceptable Not Acceptable Explain: on extend Well Label (outside) Not Acceptable Explain: Acceptable Well Label (inside) Acceptable Not Acceptable Explain: J-Plug Acceptable Not Acceptable Explain **PURGE METHOD** Date: 6/2/20 Time: 6754 Method: low-flow = 25.32 Total Well Depth (ft) = 1.04 Depth to Water (ft): = 24.28 Water Column (ft): Comments: **OBSERVATIONS** Odor: H2S , Fuel Like , Other: Comments:

			FI	ELD PARAMET	TERS				<u>:</u>
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
			+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	
0860	Start	Pera	e		Ĺ				
0805	0.4	310	4.57	1.02	-50.0	8.085	13.91	33.8	1.12
0810	0.8	300	7.50	6.64	-95.7	8.695	18.60	12.7	1.12
0815	1:2	300	750	0.54	-105-5	8.858	1365	25.6	1.13
0820	1.6	300	700	049	-110.5	8.900	13.68	31.9	1.17
0825	2.0	300	7.50	0.46	-1157	8,947	13.06	90.6	1-13
0830	2.4	300	7.50	હલ્ત	-119.9	8960	13.68	839	1-15
0835	28	300	7.58	042	-123.9	8.896	13.76	47.2	6/2
0840	52	300	750	0.41	125. 2	9.357	1367	130	1.10
0845	3.6	300	7.50	0.40	-127.6	8.968	13. 73	47.9	001.09
0850	4.0	360	7.50	0.39	-129.7	8.918	1366	\$3.7	1.08
0855	44	500	750	034	-131-3	8997	13 GI	50.2	1.07

SAMPLING Date: 6 7 20 Time: 0905 Sample ID: OMC - MW-516D Method of Sample Collection: Analytical Parameters: VOCS, TOC, DISSMetal, Alk, Animy MEE, Sulfide Duplicate Sample ID: OMC-MW-5/6D Q.C. Sample Type: Duplicate Q.C. Parameters: SAWE as Devent 0 Well locked? ♥ Trash picked up?

SIGNED/SAMPLER:

					9				
			Fie	ld Data Sheet	OMC Grounds	water Site			
Well Number:	MW-5	76D	Field Crew:	_	7 66	Purpose	e of Sampling:	OMC Qua	arterly Sampling
Site:	OMC		Field Conditions			PG	1		
				WELL CONDIT	ION				
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	sing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain	(~		
Locking Cap		Acceptable	Not Acceptable	Explain:	`	X10	PG 1		
Well Label (ou	ıtside)	Acceptable	Not Acceptable	Explain:		000	()		
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:					
J-Plug	<u> </u>	Acceptable	Not Acceptable	Explain:					
				PURGE METH					
Date:		Time;		Method:	low-flow				
Total Well Dep		=							
Depth to Wate	5.	=			•	\leq	Pg!		
Water Column	(ft):	=			•	dec	, that,		
Comments:				1 volume			, V		
				OBSERVATIO	NS				
Odor:	None , L	ow , High	H ₂ S Fuel	Like Other:					
Comments			1	De	1				
			te	10					
	_		FI	ELD PARAME		Specific	T	- 57	1
Time	Volume (gal)	Rate (mL/min)	pH (s.u.) +/- 0.1 s,u,	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Conducta (mS/cmc) +/- 3%		Turbidity (NTU) <10 NTU	Depth to water (feet)
0900	4.8	300	7.49	0.38	-13Z.				1.0 I
6905	7	no	16	0 - 0		`	- 0 0	<u> </u>	
	0	11000				_		 	
		 			-	+		 	
						_			
							- 		
	-	 				+			
	-					\perp			
1									
				SAMPLING		<u> </u>			
Date:				Time:	-				
Sample ID:		70		Maihad of Sam	nio Collection	arab			
		ee a	a l	Method of Sam	pie Collection:	grab			
Analytical Parar		` '(1	
Q.C. Sample Ty	/pe:	MS/MSD	Duplicate	Duplicate Samp	ole ID:	0	e Pi	•	
Q.C. Parameter	'S.						10		
Frash picked up)?		Well looked?						<u> </u>
SIGNED/SAMP	LER:	\ \ L	1/1						
		7/1	/						.

				10.101.110					
18/all Alcook and	1 No	bc.		1	OMC Groundwat		- W	0110.0	and a Consulting
Well Number:		42		latt Gi	76°F	Purpose of Samp	oling:	OMC Qua	arterly Sampling
Site	OMC		Field Conditions:	WELL CONDIT			-		
Well Pad		Acceptable	Not Acceptable	Explain:	1411				
Protective Ca	sing	Acceptable	Not Acceptable	Explain					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (or	ıtside)	Acceptable	Not Acceptable	Explain:	Not presen	+			
Well Label (in	side)	Acceptable	Not Acceptable	Explain:	Nut present	-			
J-Plug		Acceptable	Not Acceptable	Explain:					
- 3 6 / 5			Le 1	PURGE METH					
Date: 060		Time: 15	-	Method:	low-flow				
Total Well De	455	= 5.42	2						
Depth to Wate	* * = =	= 2.09		0.3					
Water Column	i (rry:	- 201		1 volume					
Comments				i volulie					
				OBSERVATIO	MC				
Odor:	None L	ow High	. H₂S , Fuel	Like , Other:	143				
Comments		16573	• 1000						
			FI	ELD PARAME	TERS				
Time	Volume (gal)	Rate (mL/min)	ρH (s.u.) +/- 0.1 s,u,	DO (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
1510	0.1	320	7.95	7.87	69.3	6.558	15-28	<10 NTU	3-36
1915	0,4	380	7.64	7.57	81.9	6-546	14.87	6.8	3 36
1520	0.9	320	7.64	7.79	89.4	0.544	14.81	6.7	3.35
1525	1.3	320	7.66	8.02		6.542	14.73		3.35
		326			96.2	0.542		0.5	3.35
1530	1.7	760	7.68	8.17	1017	0.576	14.69	0.7	5.50
							-		
	ļ								
						Α			
			****	SAMPLING		•			
Date: 060	1 2.0			Time: 153	35				
Sample ID:		- F10.C		Method of San		grab			
Analytical Para	meters:	- 7 007	1, Diss. M			→			
					nio ID:				
Q.C. Sample T		MS/MSD	Duplicate	Duplicate Sam	pie IU:				
Q.C. Paramete									
rash picked u	e:		Well locked?	51					
SIGNED/SAMF	PLER:		utt Hel	all					

					mig wen				
	No.	240		. ,	OMC Groundwat				
Well Number:		280		lett G.	OC	Purpose of Sam	pling:	OMC Qua	arterly Sampling
Site:	OMC		Field Conditions	WELL CONDIT					
Well Pad		Acceptable	Not Acceptable	Explain:	ION				
Protective Cas	sing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (ou	ıtside)	Acceptable	Not Acceptable		Not orchi	4			
Well Label (ins	•	Acceptable	Not Acceptable	Explain:	Not prise	+			
J-Plug	,	Acceptable	Not Acceptable	Explain:	NOT PROCE				
	_			PURGE METH	OD	· -	 -		
Date: 06/	102/20	Time: 100		Method:	Low-Flow				
Total Well Dep	oth (ft)	= 27	-00						
Depth to Wate	er (ft):	= 343)						
Water Column	(ft):	= 23.8	77	3-8					
Comments:				1 volume					
	-			OBSERVATIO	NS				
Odor:	(None) L	ow , High	, H₂S , Fuel	Like , Other:					-
Comments:									
			<u> </u>						
	14011	Data	FI	ELD PARAMET	1	Specific	Ī ₊	1	<u></u>
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	(mV)	Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
			+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	
1008	O and	320	7.05	9.04	4445	1.255	14.81	8.9	3.21
1013	0.5	320	7.09	10.17	153.4	1.241	13.63	3.4	3.22
1018	09	320	7.10	10.48	161.6	1.239	13.54	2-1	3.21
1023	1.3	320	708	9.15	167.2	1-250	1358	0.7	3-22
628	1.6	320	7-07	9.53	168.2	1.248	13.57	0.2	3.23
1033	2.4	320	7.06	9.53	176.4	1.249	13.34	0.0	
1000	2.1		7.00		(,-,(100	17.01	0.0	- 5
				 					
		-			<u> </u>				
									-
				SAMPLING	<u></u>	<u>-</u>			
Date: 06	102/20				40				
		u-528D)	Method of Sam		(
Analytical Para	-		A. D35.		ipio consolion.	Grab			
		-							
Q.C. Sample Ty		MS/MSD	Duplicate	Duplicate Samp	ple ID:				
Q.C. Parameter									
Trash picked up	*-/		Well locked?	Les L s					
SIGNED/SAMP	I FR:		4/1/1 11	17 //					

			Monite	oring well		
191		Field	d Data Sheet	- OMC Groundwater Site		
Well Number: NN U	200	Field Crew: L.	Schare	h Purpose of	Sampling:	OMC Quarterly Sampling
Site: OMC		Field Conditions:	Partly	SUNNY 67°F		
		١	WELL COND			
Well Pad	Acceptable	Not Acceptable	Explain	ground cover =1	nell pad	80
Protective Casing	Acceptable	Not Acceptable	Explain:			*Wasps in
Well Casing	Acceptable	Not Acceptable	Explain:	8 %		
Locking Cap	Acceptable	Not Acceptable		CAP is Good, but		well cap
Well Label (outside)	Acceptable	Not Acceptable	Explain:	No outside labe	J.	
Well Label (inside)	Acceptable	Not Acceptable	Explain			
J-Plug	Acceptable	Not Acceptable	Explain			
			PURGE MET	IOD		·
Date: (2) 11 2020	Time: 14:0	00	Method:	low-flow		
Total Well Depth (ft)	= 10.54	,				
Depth to Water (ft):	= 3134					
Water Column (ft):	= 7.22		11.6			
Comments:			1 volume			
<u> </u>		'	OBSERVATION	SNS		

None , Low , High , H₂S , Fuel Like , Other: Odor:

comments: light brown wester with light brown flecs of material.

			FI	ELD PARAMET	ERS				
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
			+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/-3%	+/- 3%	<10 NTU	200
14:12		240	6.95	0.69	-89.8	0,695	13.20	2.9	3.45
14:17		240	6.71	0.28	-85.4	0.674	13.26	1.2	3.45
14:22		240	6,63	0118	-84,3	0,676	13.11	1.1	3.45
14:27		240	600	0,12	-83,9	0.676	13.12	1,5	3,45
14:32		240	6,57	0.09	-84, 2	0.675	13.49	1.9	3.45
14:37		240	6.55	0.09	-83.8	0,673	13,47	1.9	3.45
14:42		240	6.54	0.08	-83,9	0.675	13.25	1.9	3,45
14:50	SAM	PLEO						<u> </u>	
	4.5								

SAMPLING

Date: 4/1/2020

Time: 14,50

Sample ID: OMC MW - 6005

Method of Sample Collection:

Analytical Parameters: VOCS, Metal S, MNA

Q.C. Sample Type: NJA

MS/MSD-

Duplicate Duplicate Sample ID:

Q.C. Parameters: N/A

Trash picked up? Y

Well locked? Y

SIGNED/SAMPLER:



		MOITE	oring well		
10	Fiel	d Data Sheet	- OMC Groundwate	er Site	
)	Field Crew: 🛴	SCHAR	LC14	Purpose of Sampling:	OMC Quarterly Sampling
	Field Conditions:	CLOUD	1 65°F		
	-	WELL CONDI	TION	'	
Acceptable	Not Acceptable	Explain:	Well pad	is ground cover	
Acaptable	Not Acceptable	Explain:	·	3	
Adcentable	Not Acceptable	Explain:			
Acceptable	Not Acceptable	Explain:			
Acceptable	Net Acceptable	Explain	No outsid	c label	
Acceptable	Not Acceptable	Explain:			
Acceptable	Not Acceptable	Explain:		12	
		PURGE MET	HOD		····
Time: 123	25	Method:	low-flow		
= 751	5				
		3.5			
		1 volume			
	Acceptable Acceptable Acceptable Acceptable Acceptable Acceptable Time: 12'- = 25.11 = 3.31	Field Crew: Field Conditions: Coeptable Acceptable Not Acceptable Acceptable Not Acceptable Not Acceptable	Field Crew: L. SCHD R Field Conditions: CLOUD WELL CONDITION Acceptable Not Acceptable Explain:	Field Crew: L. SCHD RCH Field Crew: L. SCHD RCH Field Conditions: CLOUDY 165°F WELL CONDITION Coepitable Not Acceptable Explain: Well pack Acceptable Not Acceptable Explain: PURGE METHOD Time: 12:25 Method: low-flow Time: 12:25 Method: low-flow 3.5	Field Data Sheet - OMC Groundwater Site Field Crew: L. SCHDRCH Purpose of Sampling: Field Conditions: CLOUDY U5°F WELL CONDITION Acceptable Not Acceptable Explain: Well pack is ground cover Acceptable Not Acceptable Explain: PURGE METHOD Time: 12:25 Method: low-flow ### Company of the purpose of Sampling: ### Company of Samplin

OBSERVATIONS

Odor: None , Low , High , H₂S , Fuel Like , Other:

comments: Light brown water With floating brown particles. Turbidity between 13:078
13:12 reduced on its own. Fram in purge water bocket.

	k0		FII	ELD PARAMET	ERS				A- A
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	(mg/L)	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%	Turbidity (NTU) <10 NTU	Depth to water (feet)
12:37		240	4.99	320.6		1.908	12.73	28.8	3.45
12:42		240	6.88	0.4	55,2	1.891	12.41	26.3	3.79
2.47		120	le.85	0.22	29.2	1.870	12,59	39,1	3.74
12:52		280	6.94	0.14	-12.9	1,872	12.13	465	3,76
12:57	,	280	6. ⁴³	0.08	-49,9	1.878	11.92	55.3	3.86
13:02		280	6.67	0,06	-74.0	1.902	11.96	19.5	3.86
13:07		240	6.59	0.05	-95.6	1,960	12.22	120.0	3.84
13:12		240	6.54	0,05	-101.8	2.012	12.31	28.8	3.86
13 17		240	10.51	0.05	-104.2	2,045	12.16	48.0	3.86
13:22	V	240	4.50	0.04	-106.5	2,080	12.15	41.1	3,86
13:27	4.5	240	4.50	0.04	-105.9	2,062	12.49	41.2	3,86
13:35	SAMI	PLED							

SAMPLING

Date: 101112020

Time: 13:35

Sample ID: OM C-MW-600 D

Method of Sample Collection: gral

Analytical Parameters: VOCs, Metals, MNA

Q.C. Sample Type: UID MS/MSD

Duplicate

Duplicate Sample ID:

Q.C. Parameters: NIA

Trash picked up?

Well locked? 3

SIGNED/SAMPLER:

Laci shoop

			Field	Data Sheet - (OMC Groundwater	Site				
						Purpose of Samplir	ng: C	MC Quarte	rly Sampling	
Vell Number:	mw - 6		Field Crew: W.		. 8					
ite:	OMC		leid Conditions:	ELL CONDITION	surry, hour					
Vell Pad		Acceptable	Not Acceptable	Explain:	<u> </u>					
	no /	Acceptable	Not Acceptable	Explain:						
rotective Casi	ng	Acceptable	Not Acceptable	Explain:						
Vell Casing		Acceptable	Not Acceptable	Explain:						
ocking Cap			Not Acceptable	•	is help if fine	1				
Veli Labei (out		Acceptable	Not Acceptable	Explain:	7.00	(
Vell Label (ins	ide)	Acceptable		Explain	E 2240					
-Plug		Acceptable	Not Acceptable	PURGE METH	00					
ate: 6/4/	20	Time: 081		Method	low-flow					
otal Well Dep	_	= 10.61	J							
epth to Wate		= 3.49								
Vater Column		= 7.2		11.5						
Valer Column	1119.			1 volume						
Comments:										
				OBSERVATIO	NS					
	(None), 1	ow , High	, H₂S , Fuel	Like , Other:						
Odor:	(None),	2017 , 711g-1								
Comments:										
			F	IELD PARAME	TERS					
	Volume	Rate	pH (s.u.)	DO	ORP	Specific Conductance	Temp (°C)	Turbidity (NTU)	Depth to water (feet)	
Time	(gal)	(mL/min)	ľ	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	+/- 3%	<10 NTU	<u></u>	
1317	0.5	400	7.01	0.64	-1933	0.629	12.72	14.1	3.52	
0320				 		0.627	12.71	17.4	356	
0825	1.0	400_	7.00	0.49	-201.2	1 1	12.60	,	356	
0830	1.5	400	711	0.41	-205.1	0.621	347	++-	356	
0835	2.0	400	7,13	0.35	-206.9	0.614	12.63	++-	356	
OBYO	1.5	4,00	7.14	0.33	-207.0	0.611	12.65		7.56	
0845	3.0	400	7.13	0.32	-208.7	0,610	12.71	↓		
	3.5	400	7.13	0.32			12.73	11_	7.36	
085 <u>0</u>	11)	100	 ' '' 	+				Conder	Setian on	Vic
			 		 	 	 	in He	ile turbidin	eter
			<u> </u>			 	+	Preve	ile turbidin	- 14
		<u> </u>			<u> </u>	 	+	1		
								↓	 	
	+						l		<u> </u>	
				CARDLIN	<u> </u>					
			89	SAMPLIN						
Date: 6/4	120			-						
Sample ID:	omc-	0150 -1	mw-601	Method of S	ample Collection:	grab				
			etals, N		N.					
Q.C. Sampl		MS/MSO	Duplicate	Duplicate S	ample ID: OM	L-mw-	6015			
	5.5				-	1				
Q.C. Param			Well locked?							-
Trash picke	y	. ^	AAGII IOCKAA	7						
SIGNED/S/	AMPLER:	_6								-
			_							

					<u>Monitori</u>	ng Well				
-				Field (Data Sheet - Ol	MC Groundwater	Site			10 10-
-	Well Number: Y	MW-60	ND F	ield Crew: W.	Kite	F	Purpose of Samplin	g C	MC Quarte	rly Sampling
		ОМС		reld Conditions	705 F1	SUMY, br	esty			
•				Not Acceptable	Explain:	<u> </u>				
	Well Pad		Acceptable	Not Acceptable	Explain.					
	Protective Casin	9	Acceptable	Not Acceptable	Explain:					
	Well Casing		Acceptable	Not Acceptable	Explain:					
	Locking Cap Well Label (outs	ide)	Acceptable	Not Acceptable	Explain:	old not A	W			
	Well Label (insid		Acceptable	Not Acceptable	Explain:					
	J-Plug	,	cceptable	Not Acceptable	Explain:					
					URGE METHO					
	Date: 6/3/2 Total Well Depti		Time: 09.7 = 241.96		Method: k	ow-flow				
	Depth to Water	(ft):	= 3.40							
	Water Column ((ft):	21.56		3.4					
	Comments:				1 volume					
				(DBSERVATION	s				
	Odor:	None Lo	w , High	H₂S Fuell	ike Other:					
	Comments:									
				FIE	LD PARAMET	ERS				
	Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	(mg/L)	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%	Turbidity (NTU) <10 NTU	Depth to water (feet)
		0.5	400	+/- 0.1 s,u,	1276	-141.0	2312	11.88	53.3	3.57
	0930	1.0		6.38	0.49	-140.5	2.755	11.95	45.2	357
	0935		400	6.37	0.44	-140.0	2.353	11.98	31.4	367
	0440	1.5	400	6.34			2.350	12.09	521	3.57
	0943	20	400	6.37	0.36	-137,6	-5		50.7	
Switch for	0950	25	400	6.38	0.35	-135.3	2,349	$\overline{}$	33.6	3.57
Switch	0955	30	400	6,31	0.33	-123.8	2.739	12.11		3,53
451 _	- 1000	3.5	400	6.10	0.55	-80.9	2503	12.64		
R12832	1005	40	400	6.11	0.51	-82.3	2.506	1264		3.57
015949	1010	45	400	6.11	0.46	-82.7	2.507	12.30		3.57
VI 311.	1015	SiD	400	6.11	0.46	- 83.1	2.563	1275	8.8	357
			l	3		-2		 	 	<u> </u>
						<u> </u>	<u></u>	<u> </u>	<u> </u>	<u></u>
					SAMPLING					
	Date: 6/	3 ho			Time: (020)				
	•	-	1W-60	n D	Method of Sai	mple Collection	grab			
	Analytical Par			Metals,	MNA	4				
	Q.C. Sample		MS/MSD	Duplicate	Duplicate San					
	Q.C. Parame									
	Trash picked	up? Y	_	Well locked?	/					
	SIGNED/SAM	MPLER:	_62	5/7						

			Field	d Data Sheet -	OMC Groundwate	er Site			
Well Number:	MW-	6025	Field Crew:	le46.		Purpose of Sam	oling:	OMC Qua	arterly Sampling
Site:	OMC		Field Conditions:	Succy,	84'F				
			1	WELL CONDIT	ION	-		-	
Well Pad		Acceptable	Not Acceptable	Explain:	Marguera	-N/A			
Protective Cas	sing	Acceptable	Not Acceptable	Explain:	,				
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable		NA				
Well Label (ou	tside)	Acceptable	(Not Acceptable	Explain:	Not preser	<i>s</i> +			
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:	(
J-Plug		Acceptable	Not Acceptable	Explain:					
Date: Non	220	Time: 1 2		PURGE METH Method:		<u> </u>			
Total Well Dep		Time: 1257		would.	low-flas				
Depth to Wate		= 2.a							
Water Column		= 6.3		1.0					
	(,-			1 volume					
Comments:									
				OBSERVATIO	NS		 -		
Odor:	None	Low , High							
Comments:									
			FIE	LD PARAMET	ERS				
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance	Temp	Turbidity	Depth to water
			+/- 0.1 s,u,	+/- 10%	+/- 10 mV = (27	(mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
1502	DIL	280	7.37	2.43	2666	0 666	15.05	4.4	291
1507	0.4	280	7.26	6.21	-130	0.631	14.78	0-6	2.95
1512	1.0	280	7.21	0.37	-1305	0.615	19-46	6-0	2.95
1517	1.4	180	7.16	0.26	129.9	0.613	1457	0-8	2.95
1522		280	7.13	0.23	-129	0.669			2.94
1527	2.4	280	7.09	0.22		0.612	_		2,99
_(701	U	700	7,00,	0.00	1017	0.612	19(.70	0,0	277
								<u> </u>	
	_							ļ <u>.</u>	<u> </u>
				SAMPLING					<u> </u>
Date: 6602	20			Time: (53	5				
Sample ID: 5		- 607			ple Collection:	L			
			, 0735 Met	zk		rao			
Q.C. Sample Ty		MS/MSD			nia ID:				
		IVIO/IVIOU	Dahucare	Duplicate Sam	μ ιο ID;				
Q.C. Parameter			MACHILL A. 10. 64	_					
Trash picked up SIGNED/SAMP	,	A	Well locked?	7//	7				
JUNED/3AMP	LCD:	1/	111112 1						

					MC Groundwater S	Site Turpose of Samplin	a: C	MC Quarte	ny Sampling
ell Number:	MW-602			elt G		игроз а ог зашрш	·y.		
te:	омс	F	ield Conditions:	Durcast,	N				
	111	Acceptable	Not Acceptable	Explain:					
'ell Pad rotective Casir	na (Acceptable	Not Acceptable	Explain:					
ell Casing	,a (Acceptable	Not Acceptable	Explain:					
ocking Cap		Acceptable	Not Acceptable	Explain:	SIA				
ell Label (outs	aide)	Acceptable	Not Acceptable	Explain:	sof present				
Vell Label (insi		Acceptable	Not Acceptable	Explain:	1				
-Plug		Acceptable	Not Acceptable	Explain:					
		10		URGE METHO	D low-flow				
Date: 06/0	19/00	Time: 00		Method:	lOM-11OM				
otal Well Dept		= 05, = 2,99							
epth to Water		= 229		3.7					
Vater Column	(rg.	- 62	1	1 volume					
Comments:									
				OBSERVATION	is				
 Odor:	None , Lo	w , High	. (H ₂ S), Fuel	Like , Other:					
Comments:	mater	.7 Ha	chish wh	de ours	129				
	VORIEL	(4		·					
			FI	ELD PARAMET		Specific	Temp	Turbidity	Depth to water
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Conductance (mS/cmc)	(°C)	(NTU)	Depth to water (feet)
	(gal)	(mL/min)	pH (s.u.)	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Conductance (mS/cmc) +/- 3%	(°C) +/- 3%		
06037	(gai)	(mL/min) 300	pH (s.u.) +/-0.1 s.u.	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Conductance (mS/cmc) +/- 3%	(°C)	(NTU) <10 NTU & Z - 3	(feet)
0842	(gal) 	(mL/min) 300	pH (s.u.) +/-0.1 s,u, 7 - 30	DO (mg/L) +/- 10% 1, 4, 8	ORP (mV) +/- 10 mV - 96.8 - 194.3	Conductance (mS/crnc) +/-3% 3, 997 3, 973	(°C) +1-3% 13-21 12-63	(NTU) <10 NTU 62.3	(feet) - 3.63
06037	(gal) 0_1 0_4 0_9	(mL/min) 300 300	pH (s.u.) +/-0.1 s,u, 7-30 7-54 7-54	DO (mg/L) +/- 10% 1, 48 0-50	ORP (mV) +/- 10 mV - 96.8 - 194.3 - 195.2	Conductance (mS/cmc) +/-3% 3, 487 3, 473 3-048	(°C) 13-71 17-63 (2.40	(NTU) <10 NTU 62.3 4.1	3.63 3-64
0637 0842 0847 6852	(gal) 0-1 0-4 0-9	300 300 300 300	pH (s.u.) +/-0.1 s.u. 7.30 7.54 7.54 7.70	DO (mg/L) +/- 10% 1, 48 0-50 0-40 6-33	ORP (mV) +/-10 mV - 90.8 -194.3 -155.2 -164.(Conductance (mS/cmc) +/-3% 3.473 3.473 3.048	(°C) +1.3% 13.21 12.63 (2.40	(NTU) <10 NTU 62.3 4.1 1.3 0.6	3.63 3.64 3.04 3.04
0637 0842 0847	(gal) 0-1 0-4 0-9	(mL/min) 300 300 300 300 300	pH (s.u.) +/-0.1 s.u. 7.30 7.54 7.54 7.70 7.74	DO (mg/L) +/-10% 1,48 0-50 0-46 6-33	ORP (mV) +10 mV - 96.8 -194.3 -155.2 -164.1 -171.2	Conductance (mS/crnc) +/-3% 3, 987 3, 987 3-048 7.985 7.985	(°C) +1.3% 13.21 12.63 (2.40 12.37	(NTU) <10 NTU 62-3 4-1 1-3 0-6	3.63 3.64 3.04 3.04 3.04
0637 0842 0847 6852	(gal) 	(mL/min) 300 300 300 300 300 300	pH (s.u.) +/-0.1 s,u, 7.30 7.54 7.54 7.70 7.74 7.75	DO (mg/L) +/-10% 1,48 0-50 0-46 6-33 0.26 0-23	ORP (mV) +/-10 mV - 90.8 -194.3 -155.2 -164.1 -171.2	Conductance (m\$/crnc) +/-3% 3.987 3.987 3.048 7.985 2.929 8.883	(°C) 13.21 12.63 12.40 12.37 12.49 17.39	(NTU) <10 NTU 62.3 4.1 1.3 0.6 6.3	3.63 3.04 3.04 3.04 3.04 3.04
0937 0842 0847 6852 6857	(gal) 0.1 0.4 0.9 1.7 1.7	(mL/min) 300 300 300 300 300	pH (s.u.) +/-0.1 s.u. 7.30 7.54 7.54 7.70 7.74	DO (mg/L) +/-10% 1,48 0-50 0-46 6-33	ORP (mV) +10 mV - 96.8 -194.3 -155.2 -164.1 -171.2	Conductance (m\$/crnc) +/-3% 3.987 3.987 3.048 7.985 2.929 2.863	(°C) +1.3% 13.21 12.63 (2.40 12.37	(NTU) <10 NTU 62.3 4.1 1.3 0.6 6.3	3.63 3.64 3.04 3.04 3.04
0637 0842 0847 6852 6857 0902	(gal) 0.1 0.4 0.9 1.7 1.7	(mL/min) 300 300 300 300 300 300	pH (s.u.) +/-0.1 s,u, 7.30 7.54 7.54 7.70 7.74 7.75	DO (mg/L) +/-10% 1,48 0-50 0-46 6-33 0.26 0-23	ORP (mV) +/-10 mV - 90.8 -194.3 -155.2 -164.1 -171.2	Conductance (m\$/crnc) +/-3% 3.987 3.987 3.048 7.985 2.929 8.883	(°C) 13.21 12.63 12.40 12.37 12.49 17.39	(NTU) <10 NTU 62.3 4.1 1.3 0.6 6.3	3.63 3.04 3.04 3.04 3.04 3.04
0637 0842 0847 6852 6857 0902	(gal) 0.1 0.4 0.9 1.7 1.7	(mL/min) 300 300 300 300 300 300	pH (s.u.) +/-0.1 s,u, 7.30 7.54 7.54 7.70 7.74 7.75	DO (mg/L) +/-10% 1,48 0-50 0-46 6-33 0.26 0-23	ORP (mV) +/-10 mV - 90.8 -194.3 -155.2 -164.1 -171.2	Conductance (m\$/crnc) +/-3% 3.987 3.987 3.048 7.985 2.929 8.883	(°C) 13.21 12.63 12.40 12.37 12.49 17.39	(NTU) <10 NTU 62.3 4.1 1.3 0.6 6.3	3.63 3.04 3.04 3.04 3.04 3.04
0637 0842 0847 6852 6857 0902	(gal) 0.1 0.4 0.9 1.7 1.7	(mL/min) 300 300 300 300 300 300	pH (s.u.) +/-0.1 s,u, 7.30 7.54 7.54 7.70 7.74 7.75	DO (mg/L) +/-10% 1,48 0-50 0-46 6-33 0.26 0-23	ORP (mV) +/-10 mV - 90.8 -194.3 -155.2 -164.1 -171.2	Conductance (m\$/crnc) +/-3% 3.987 3.987 3.048 7.985 2.929 8.883	(°C) 13.21 12.63 12.40 12.37 12.49 17.39	(NTU) <10 NTU 62.3 4.1 1.3 0.6 6.3	3.63 3.04 3.04 3.04 3.04 3.04
0637 0842 0847 6852 6857 0902	(gal) 0.1 0.4 0.9 1.7 1.7	(mL/min) 300 300 300 300 300 300	pH (s.u.) +/-0.1 s,u, 7.30 7.54 7.54 7.70 7.74 7.75	DO (mg/L) +/-10% 1,48 0-50 0-46 6-33 0.26 0-23	ORP (mV) +/-10 mV - 90.8 -194.3 -155.2 -164.1 -171.2	Conductance (m\$/crnc) +/-3% 3.987 3.987 3.048 7.985 2.929 8.883	(°C) 13.21 12.63 12.40 12.37 12.49 17.39	(NTU) <10 NTU 62.3 4.1 1.3 0.6 6.3	3.63 3.04 3.04 3.04 3.04 3.04
0637 0842 0847 6852 6857 0902	(gal) 0.1 0.4 0.9 1.7 1.7	(mL/min) 300 300 300 300 300 300	pH (s.u.) +/-0.1 s,u, 7.30 7.54 7.54 7.70 7.74 7.75	DO (mg/L) +/-10% 1,48 0-50 0-46 6-33 0.26 0-23	ORP (mV) +/-10 mV - 90.8 -194.3 -155.2 -164.1 -171.2	Conductance (m\$/crnc) +/-3% 3.987 3.987 3.048 7.985 2.929 8.883	(°C) 13.21 12.63 12.40 12.37 12.49 17.39	(NTU) <10 NTU 62.3 4.1 1.3 0.6 6.3	3.63 3.64 3.04 3.04 3.04 3.04
0637 0842 0847 6852 6857 0902	(gal) 0.1 0.4 0.9 1.7 1.7	(mL/min) 300 300 300 300 300 300	pH (s.u.) +/-0.1 s,u, 7.30 7.54 7.54 7.70 7.74 7.75	DO (mg/L) +/-10% 1,48 0-50 0-46 6-33 0.26 0-23	ORP (mV) +/-10 mV 90.8144.3155.7164.1171.7174.5	Conductance (m\$/crnc) +/-3% 3.987 3.987 3.048 7.985 2.929 8.883	(°C) 13.21 12.63 12.40 12.37 12.49 17.39	(NTU) <10 NTU 62.3 4.1 1.3 0.6 6.3	3.63 3.64 3.04 3.04 3.04 3.04
0637 0842 0847 6852 6857 0902 0907	(gai) 0-1 0-1 0-9 1-7 2.2 2-6	(mL/min) 300 300 300 300 300 300	pH (s.u.) +/-0.1 s,u, 7.30 7.54 7.54 7.70 7.74 7.75	DO (mg/L) +1/10% 1,48 0-50 0-46 0-33 0.26 0-23 0.21	ORP (mV) +/-10 mV 90.8144.3155.7164.1171.7174.5	Conductance (mS/crnc) +/-3% 3, 987 3, 987 3, 985 2, 985 2, 985 2, 987 2, 875	(°C) 13.21 12.63 12.40 12.37 12.49 17.39	(NTU) <10 NTU 62.3 4.1 1.3 0.6 6.3	3.63 3.04 3.04 3.04 3.04 3.04
0637 0847 0847 6857 0907 0907	(03/26	(mL/min)	pH (s.u.) +/-0.1 s,u, 7.30 7.54 7.54 7.70 7.74 7.75	DO (mg/L) +1/10% 1,48 0.50 0.46 0.33 0.26 0.26 0.26 SAMPLING Time: 0	ORP (mV) -40.8 -144.3 -155.2 -164.1 -171.2 -174.5 -177.1	Conductance (mS/crnc) +/-3% 3, 987 3, 987 3, 985 2, 985 2, 985 2, 987 2, 875	(°C) 13.21 12.63 12.40 12.37 12.49 17.39	(NTU) <10 NTU 62.3 4.1 1.3 0.6 6.3	3.63 3.64 3.04 3.04 3.04 3.04
0637 0847 0847 6857 0907 0907	(03/26)	(mL/min)	PH (S.U.) +1-0.1 S.U. 7-30 7-54 7-54 7-70 7-74 7-75 7-75	DO (mg/L) +/- 10% 1.48 0.50 0.26 0.26 0.26 0.26 0.26 0.26 0.26 0.2	ORP (mV) -40.8 -144.3 -155.2 -164.1 -171.2 -174.5 -177.1	Conductance (mS/crnc) +/-3% 3, 987 3, 987 3, 985 2, 985 2, 985 2, 987 2, 875	(°C) 13.21 12.63 12.40 12.37 12.49 17.39	(NTU) <10 NTU 62.3 4.1 1.3 0.6 6.3	3.63 3.64 3.04 3.04 3.04 3.04
06/37 08/47 08/47 68/57 09/07 09/07 09/07 09/07 09/07 09/07 Analytical Pa	(03/26) MW MW-	(mL/min) 	PH (S.U.) +1-0.1 S.U. 7.30 7.54 7.70 7.74 7.75 7.75	DO (mg/L) +1/10% 1.48 0.50 0.26 0.26 0.26 0.26 0.26 Method of Samethals	ORP (mV) +/- 10 mV - 96.8 -194.3 -155.7 -164.1 -171.7 -174.5 -177.1	Conductance (mS/crnc) +/-3% 3, 987 3, 987 3-048 7, 985 7, 985 7, 985 7, 987 5	(°C) 13.21 12.63 12.40 12.37 12.49 12.39	(NTU) <10 NTU 62.3 4.1 1.3 0.6 6.3	3.63 3.64 3.04 3.04 3.04 3.04
0637 0847 0847 6857 0907 0907	(gai)	(mL/min)	PH (S.U.) +1-0.1 S.U. 7.30 7.54 7.70 7.74 7.75 7.75	DO (mg/L) +1/10% 1.48 0.50 0.26 0.26 0.26 0.26 0.26 Method of Samethals	ORP (mV) -40.8 -144.3 -155.2 -164.1 -171.2 -174.5 -177.1	Conductance (mS/crnc) +/-3% 3, 987 3, 987 3-048 7, 985 7, 985 7, 985 7, 987 5	(°C) 13.21 12.63 12.40 12.37 12.49 12.39	(NTU) <10 NTU 62.3 4.1 1.3 0.6 6.3	3.63 3.64 3.04 3.04 3.04 3.04

·			Field		oring Wel				
Well Number:	/40 W	11W -6NZ S	Field Crew: W,			Purpose of Sam	pling:	OMC Qua	rterly Sampling
Site:	OMC	(00 003 3		_	605 F1 br	tezy			
				VELL CONDI					
Well Pad		Acceptable	Not Acceptable	Explain:	under wat	4			
Protective Cas	ing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Vell Label (out	tside)	Acceptable	Not Acceptable	Explain:	nat visit	ole			
Well Label (ins	ide)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:		-			<u>;</u>
Tota: ("111:	20	Time: 11.7	_	PURGE MET Method:	low-flow	· · · · · · · · · · · · · · · · · · ·			
Date: 🎸 \ / Total Well Dep		Time: (1 2	3						
Depth to Water	r (ft):	= 3.0)							
Water Column	(ft):	= 7.97		1.3					
Comments:				1 volume					
									_
				OBSERVATI	.				_
Odor:	None ,	Low , High	, H ₂ S , Fuel	Like , Uthe	r.				
Comments:									
				ELD PARAMI	ETERS		<u> </u>		
	Volume	Rate		DO	ORP	Specific Conductance	Temp	Turbidity	Depth to water
Time	(gal)	(mL/min)	pH (s.u.) +/- 0.1 s,u,	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
1125	Begil	A nulla	77- 0.1 3,0,		17-10-110				
1130	0.66		7,18	0.70	-47.8	0.547	13.21	4.1	3.00
	1.33		7.22	0.53	-60.9	0,565	13.16	7.3	3,00
1135	2.00						13,19	2,5	3,00
1140	1		7.22	0.46	-62.4	0.571			525
1145	2,66		7.23	0.43	-63.8	0,575	13.16		
1150	3,33	3 500	7,21	0.41	-67.6	0.575	13.17	4.1	3,00
						_		-	Ш
				<u> </u>			_	ļ	
							<u> </u>	ļ	<u> </u>
8									<u> </u>
									<u> </u>
				SAMPLIN	G		-		
Date: 6/1	120		-	Time: 115			-		
۱ رات ۱۵: Sample ID: 🔑	100				ample Collection:	grab			
Analytical Para	Ameters.	mm - 603	35						
-			metals,	Duplicate Sa					
Q.C. Sample 1		MS/MSD	Duplicate	Dublicate 28	ampie IU.				
Q.C. Paramete									
Trash picked u	•		_	10 lock					
SIGNED/SAM	PLER:	[A]	100						

Monitoring Well Field Data Sheet - OMC Groundwater Site Well Number: MW-603D Field Crew: W. Kite Purpose of Sampling: **OMC Quarterly Sampling** Field Conditions: WELL CONDITION Site: DIERUST Well Pad Not Acceptable Explain: **Protective Casing** Acceptable Not Acceptable Explain: Under water Well Casing Acceptable Not Acceptable Explain. Acceptable Explain. Locking Cap Not Acceptable not visible Well Label (outside) Acceptable Not Acceptable Explain: Well Label (inside) Acceptable Not Acceptable Explain: J-Plug Acceptable Not Acceptable Explain: **PURGE METHOD** Date: 6/1/20 Time: 1220 Method: low-flow 26.52 Total Well Depth (ft) Depth to Water (ft): 2.52 Water Column (ft): Comments: **OBSERVATIONS** H₂S , Fuel Like , Other Odor: None , Low . High , Comments: FIELD PARAMETERS Specific Turbidity Depth to water (feet) ORP Temp Volume Rate DO Time (s.u.) Conductance (mL/min) (mg/L) (mV) (NTU) (gal) (°C) (mS/cmc) +/- 0.1 s.u. +/- 10% +/- 10 mV +/- 3% <10 NTU +/- 3% Begin w DUM DIL 1.11 1225 0.66 500 6,38 -22.5 3.086 10.3 7.40 11.40 1.33 500 18.1 1230 6,40 0.42 11,41 3.469 -24.7 4.%.00 1235 400 6.39 5.8 0,32 -23.7 3.528 1240 2591,006 6.40 0.32 11.68 0.9 400 -22.8 3,989 3,552 400 -22. L 11.61 6.41 0,33 SAMPLING Date: 6/1/20 Time: 1250 Sample ID: OMC-MW-6030 Method of Sample Collection: grab Analytical Parameters: VOCS, metals, MNA MS/MSD Duplicate Duplicate Sample ID: Q.C. Sample Type: Q.C. Parameters:

Trash picked up?

SIGNED/SAMPLER:

Well locked ≯

Monitoring Well Field Data Sheet - OMC Groundwater Site Well Number: MWleo45 Field Crew: L. Scharch Purpose of Sampling: OMC Quarterly Sampling Site: Field Conditions: Sunny 820F WELL CONDITION Well Pad Not Acceptable Explain: covered in Water Acceptable Acceptable **Protective Casing** Not Acceptable Explain: Well Casing Not Acceptable Explain: Locking Cap Acceptable Not Acceptable Explain: Well Label (outside) Acceptable Not Acceptable Explain: No 1 abel outside Well Label (inside) Explain: J-Plug Not Acceptable Explain: **PURGE METHOD** Date: 6/2/2020 Time: 11.10 Method: low-flow Total Well Depth (ft) = 10,64 Depth to Water (ft): Water Column (ft): Comments: **OBSERVATIONS** Odor: , High H₂S , Fuel Like , Other: Comments: brown Water

			FIE	LD PARAMET	ERS				
Time	Volume (gal)	Rate (mL/min)		DO (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
			+/- 0.1 s.u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	
11:22		200	4.68	0.92	-130.9	1.049	17.31	1.8	2.49
11:27		200	6.29	6.34	-122.4	1.051	18.16	0.0	2.49
11.32		200	Le. 21	0.24	-119,3	1.051	18.13	11.0	2.49
11:37		200	6.09	0.18	-119.0	1.046	18,35	0.8	2.49
11:42		200	6.05	0.16	-120:2	1,049	18.26	1.3	2.49
11:47		200	6.03	0.13	-122.6	1,046	18.33	1.8	2.47
11:52		200	6.02	0.12	-123.8	1.045	18.15	2.5	2.49
11:57		200	600	0.12	-125.1	1,040	18.30	1.3	2.49
12:05	Son	MPUE	D			3			
	~3.5								

SAMPLING

Date: 6/2/2020

Time: 12105

Sample ID: OMC - MW - 6045

Method of Sample Collection: grado

Analytical Parameters: VDC, Metals, MNA

Q.C. Sample Type: N/A MS/MSD

Duplicate Duplicate Sample ID:

Q.C. Parameters: N/A

Trash picked up?

W∉l locked?

			Monito	ring We	<u> </u>	
		Field	d Data Sheet -	OMC Groundw	ater Site	
Well Number: MW (OPOG	Field Crew: L.	Schar	ch	Purpose of Sampling	OMC Quarterly Sampling
Site: OMC		Field Conditions:	Sunny	1840F	•	
			WELL CONDIT	ION	···	
Well Pad	Acceptable	Not Acceptable	Explain:	Water	sumounding	Well
Protective Casing	Acceptable	Not Acceptable	Explain:		U	
Well Casing	Aggeptabe	Not Acceptable	Explain:			
Locking Cap	Acceptable	Not Acceptable	Explain:			*
Well Label (outside)	Acceptable	Not Acceptable	Explain:	Mr num	- 1 2 · ·	
Well Label (inside)	Acceptable	Not Acceptable	Explain:	TOO DUIS	side label	
J-Plug	Acceptable	Not Acceptable	Explain:			
			PURGE METH	OD		.
Date:	Time: / 2 .	30	Method:	low-flow		
Total Well Depth (ft)	= 30.01					
Depth to Water (ft):	= 4.16					
Water Column (ft):	= 25/85		4.1			
Comments:			1 volume			
	<u> </u>		OBSERVATIO	NS		<u></u> *:
Odor: None	ow), High,	H₂S , Fuell	Like , Other:		<u> </u>	

comments: brown foamy water with a lot of air bubbles

			FI	ELD PARAMET	ERS				
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%		Depth to water (feet)
12:42		200	6.01	0.35	-110.0	3.802	16,47		4,21
12:47		240	6.04	0.40	-111,1	3.712	16.51	22.3	
12,25		240	14.07	0.49	-110.4	3,600	16,53	24.0	4.21
12:57		240	20113	0.66	-107.9	3.569	16.83	14.9	4,21
13:02		240	6.15	0,71	707.3	3,557	16.95	12,6	4,21
13:07		220	6.20	1,02	-106.7	3.541	17,31	8.1	4.22
13:12		220	6,25	1.28	-107.1	3,537	17.57	9.1	4,22
13:17		180	6.27	1.46	-107,1	3,533	17.70	9.6	4.22
13.22		180	4.35	1.83	~III. 3	3.529	17,75	36,0	4,22
13:27		200	6.42	2.01	-118.6	3.494	17.85	98.7	4.22
13132		200	Le.57	2.50	-121.8	3.479	18.11	112.5	4,22
13:37		200	6.54	3.46	-120.8	€ 3.482	18.16	123,5	4.22

SAMPLING

Date: 6/2/2020

Time: 14.15

Sample ID: OMC-MW-404D

Method of Sample Collection:

Analytical Parameters: VOCS, Metals, MNA

Q.C. Sample Type: N//A MS/MSD

Duplicate Duplicate Sample ID:

Q.C. Parameters: N/A

Trash picked up?

Pg.20f2

			Data Obasia	NAC Croundurator	Cito			
	•0115			OMC Groundwater	Purpose of Sampli	na:	OMC Quarte	erly Sampling
Well Number: ${\sf NW}$ (_	P	scharc	<i>X</i> /1	Pulpose of Sampli	ng.	0,110 quar	,
Site: OMC		Field Conditions:	SOUVE SOUDITION	90°F				
Well Pad	Acceptable	Not Acceptable	Explain:					
Protective Casing	Acceptable	Not Acceptable	Explain:					
•	Acceptable	Not Acceptable	Explain:					
Well Casing	Acceptable	Not Acceptable	Explain:	•	SEE PC	n. 4		
Locking Cap	Acceptable	Not Acceptable	Explain:	•	366-10	" L		
Well Label (outside)	Acceptable	Not Acceptable	Explain:					
Well Label (inside) J-Plug	Acceptable	Not Acceptable	Explain:					
J-Piug	7.000\$1000		PURGE METHO	0				
Date:	Time:		Method:	low-flow				
Total Well Depth (ft)	=							
Depth to Water (ft):	=				ر دس	- ~	A	
Water Column (ft):	=				SER	F PG	1	
Comments:			1 volume					
			OBSERVATION	IS				
Odor: None ,	Low High	, H ₂ S Fuel	Like . Other:			1		
Comments:				2	BEE PG.	\mathcal{L}		
		FI	ELD PARAMET		Specific	Temp	Turbidity	Depth to water
Time Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)
-		+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/-3%	+/- 3%	<10 NTU	4 .7 .7
13 42	200	6.55	4,28	-/19.9	3.490	18,05	131.2	4.22
13:47	200	6,56	4,88	-118.5	3,501	18,14	125.1	4,22
13:52	200	10,57	5.44	-117,3	3.485	18,23	130.1	4.22
1257	200	6,58	5,80	-116.3	3.494	18.37	132.0	4.22
14:02	200	6.60	6.07	-115.6	3.497	18,67	140.0	
111:07	200	6.60	6,33	-114.6	3.5/4	18.80	141.0	4.22
14.07			W 2.5	1	1			
14:15		PUED		 	 			
	12 AL	<u> </u>		 -	 	+	+	
				 -	 	 	-	
					<u> </u>	<u> </u>	-	
							 	<u> </u>
						<u> </u>		
			SAMPLING					
Date:			Time:					
			Method of Sai	mple Collection:	grab	سرال	~ P	G. 1
Sample ID:			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		•	Sc	ic '	مد ،س
Analytical Parameters:								
Q.C. Sample Type:	MS/MSD	Duplicate	Duplicate Sar	nple ID:				
Q.C. Parameters:					<u> </u>			
Trash picked up?		Well locked?	A 1				24"	
SIGNED/SAMPLER:		a place	Vr/					
	177							

				Monito	ring W	/ell				
			Fiel	d Data Sheet -	OMC Groui	ndwater S	Site			
Well Number:	MW-	605 S	Field Crew: W	.Kin		F	urpose of Samp	ling:	OMC Qua	rterly Sampling
Site:	OMC		Field Conditions:	SUMM, &	30s=1 b	rezi	1			
				WELL CONDIT	ION		1			
Well Pad		Acceptable)	Not Acceptable	Explain:						
Protective Cas	ing	Acceptable	Not Acceptable	Explain:						
Well Casing		Acceptable	Not Acceptable	Explain:						
Locking Cap		Acceptable	Not Acceptable	Explain:						
Well Label (ou	tside)	Acceptable	Not Acceptable	Explain:						
Well Label (ins	ide)	Acceptable	Not Acceptable	Explain:						
J-Plug		Acceptable	Not Acceptable	Explain:						
		$\overline{}$		PURGE METH	OD					
Date: 6 し Total Well Dep	120 th (ft)	Time: 101	10 D	Method:	low-flow					
Depth to Water	r (ft):	= 4.26								
Water Column	(ft):	= 6.44		('5						
Comments:		West (1 volume						
Comments.										
				OBSERVATIO	NS					
Odor:	None , L	.ow , (High	,) H ₂ S , Fuel	Like , Other:				=		
Comments:										
COMMONS.										
			FI	ELD PARAME	TERS					
- :	Volume	Rate		DO	ORP		pecific	Temp	Turbidity	Depth to water
Time	(gal)	(mL/min)	pH (s.u.)	(mg/L)	(mV)	(n	onductance nS/cmc)	(°C)	(NTU)	(feet)
1045	-	460	+/- 0.1 s.u,	+/- 10%	+/- 10 mV		(-3%	+/- 3%	<10 NTU	41.2-
	-	400	6.96	0.51	-50\.		0.511	14.46		4,32
1050	ļ		6.96	0.49	-51. 8		0.511	14.49	0	4.32
1055			6.45	0,43	-54,	9	0.418	14.63	\bigcirc	4.32
1100		\	6.85	0.37	-62	า	0.529	14.61	0	4.32
1105		V	6.89	0,36	- 59.0		0,535	14.48	0	4.32
1100			0.07	0100	0 110	$\neg +$	0,005			,_
	-					\dashv				
	-					\dashv				ļ
					T					
	 	 				\dashv				
	 			ļ	 					
				SAMPLING						
Date: 6/2	120			Time: 1110						
Sample ID:		(a)	MA (2315)		nple Collectio	on: gr	ab			
ام Analytical Paral	Meters.	OMC	mw-605	5		63				
	100	•	metals.	MNA	-1-10-					
Q.C. Sample Ty		MS/MSD	Duplicate	Duplicate Sam	iple ID;					
C. Parameter	rs:									
rash picked up	o? >		Well locked?	/						
IGNED/SAMP	LER:	1.7 =	10							
		1 4 5	w 1/							

1

			Field		ring Well OMC Groundwater	Site	<u>-</u>		
Vell Number:	mw-60			Kik		Purpose of Sampli	ng	OMC Qua	rterly Sampling
Site:	OMC	- <i>y</i>	Field Conditions:		SF breeze				
*			N.	VELL CONDITION	ON				
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	ing (Acceptable	Not Acceptable	Explain					
Well Casing	~	Acceptable	Not Acceptable	Explain					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (ou	tside)	Acceptable	Not Acceptable	Explain:					
Well Label (ins	ide)	Acceptable	Not Acceptable	Explain:					
J-Plug 		Acceptable	Not Acceptable	Explain: PURGE METHO	OD.				
Date: 6/ 2/:	1.0	Time: 0903		Method:	low-flow	<u>. </u>			
Total Well Dep	1377	= 27.2	•						
Depth to Wate		= 4,10							
Water Column	(ft);	= 23.0		3.7					
Comments:				1 volume					
				_					
				OBSERVATION	NS .				
Odor:	None Lo	w Aligh) H₂S , Fuel	Like , Other;					
Comments:									
				ELD PARAMET	ERS	<u>.</u>			
	Volume	Rate		DO PARAMET	ORP	Specific	Temp	Turbidity	Depth to water
Time	(gal)	(mL/min)	pH (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 N <u>TU</u>	(feet)
0903	heri	D Las Dins	+/- 0.1 s,u,	+/- 10%	+/- 10 mV	71- 376		1,0 11,0	
0903	0.8	600	6.57	0.53	-33.)	2,727	11.66	Ö	4.70
0913	1.6		6.71	0,42	-117,5		11.63	0	4.70
	1.0	600			 	7.767	12.31	0	
918	┼	500	6.84	0.36	-123.8	2.229	596	0	4.62
0923		500	6.74	0.34	-99.8	2,183	12.37	 	4.65
		[6'A]	1 / / />	1 27 77	1 - 2 0 1	1 7 7 4 4	111 CJ	. / 1	1765
0928	<u> </u>	500	6.69	0.32	-88.6	2.259	12.38	$\overline{}$	
	-	500	6.64	0.32	-33.5	2.193	12,40	0	4.65
0928			T" -		-33.5 -79.3		12,40	0	4.65 4.65
0928		500	6.64	0,31	-33,5	2.193	12,40	0	4.65
0928 0933 0938	Collect	500 500	6.64	0.31	-33.5 -79.3	2.178	12,40	0	4.65 4.65
0928 0933 0938 0943	Collect	500 500 500	6.64	0.31	-33.5 -79.3	2.178	12,40	0	4.65 4.65
0928 0933 0938 0943	Collect	500 500	6.64	0.31	-33.5 -79.3	2.178	12,40	0	4.65 4.65
0928 0933 0938 0943	Collect	500 500	6.64	0.30	-83.5 -79.3 -72.0	2.178	12,40	0	4.65 4.65
0928 0933 0938 0943 0945		500 500	6.64	0.31 0.30 0.29	-83.5 -79.3 -72.0	2.178	12,40	0	4.65 4.65
0928 0933 0938 0943 0945	2/20	500 500 500 Szyle	6.64	0.30 0.29 SAMPLING	-83.5 -79.3 -72.0	2.178 2.178 2.164	12,40	0	4.65 4.65
0928 0933 0938 0943 0945	2/20 DMC- MI	500 500 500 Szyle	6.64	0.30 0.29 SAMPLING	-83.5 -79.3 -72.0	2.178	12,40	0	4.65 4.65
0928 0933 0938 0943 0945 Date: 6/2 Sample ID: (2/20 DMC- Mu ameters:	500 500 500 Shyle	6.64	0.30 0.29 SAMPLING Time: 094	-33,5 -79,3 -72.0	2.178 2.178 2.164	12.48	0	4.65 4.65
0928 0933 0938 0943 0945	2/20 DMC- Mu ameters:	500 500 500 Szyle	6.64	SAMPLING Time: 094 Method of Sam	-33.5 -79.3 -72.0	2.178 2.178 2.164	12.48	0	4.65 4.65
0928 0933 0938 0943 0945 Date: 6/2 Sample ID: (Analytical Par Q.C. Sample: Q.C. Paramet	2/20 DMC- Mu ameters: Type: ers:	500 500 500 Shyle	6.64 6.61 6.56	SAMPLING Time: (594) Method of Sam	-33.5 -79.3 -72.0	2.178 2.178 2.164	12.48	0	4.65 4.65
0928 0933 0938 0943 0945 Date: 6/2 Sample ID: (Analytical Para Q.C. Sample	2/20 DMC- Mu ameters: Type: ers:	500 500 500 Shyle	6.64	SAMPLING Time: (594) Method of Sam	-33.5 -79.3 -72.0	2.178 2.178 2.164	12.48	0	4.65 4.65

					OMC Groundwater	Site	-		
Well Number N	LINLIAS	V 4 S	Field Crew: [S		ON GIOUIUWARE	Purpose of Sampli	ng:	Oi. C Quart	erly Sampling
Site:	OMC	03	2278		orthe Clo	MAIL			
			V	VELL CONDITIO	ON O	U		 _	
Well Pad		Acceptable	Not Acceptable	Explain:	concrete f	od is det	eriora	nng	and 3
Protective Casi	ng	Aceplable	Not Acceptable	Explain:	۵. ۱	vois vit	. 1001	ocep	under
Well Casing		A ceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:		note ~ 1	X 111	4905	Spra
Well Label (out	side)	Acceptable	Not Acceptable	Explain: N	o label on	o	4. 00	4:	55
Well Label (insi	de)	A ceptable	Not Acceptable	Explain:	outside	~		•	
J-Plug		Acceptable	Not Acceptable	Explain:					
	202.0	Time: 43		PURGE METHO Method:	low-flow				
Date: (이니) Total Well Dept	_	Time: 7 .5	50	Modrou.					
Depth to Water		= 4.13							
Water Column				09					
	v-7	5.05		1 volume					
Comments:									
				OBSERVATION	NS				
Odor:	None ,	Low , High	, H₂S , Fuel	Like , Other:					
Comments: (lear	Durge W	ater with	h black	flecs of	material			
67F 3	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, ,				- Interior (Total			
			FI	ELD PARAMET		Specific	Temp	Turbidity	Depth to water
Time	Volume (gal)	Rate (mL/min)	ρH (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)
-			+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU_	4,81
8:10	1	360	7.39	3.08	-49.0	0.711	15.17	37.6	
8:15	$\perp \perp$	360	7.47	1104	-130.8	0.663	14.23	18.0	4.81
8:20		3:00	7.67	0.73	-43,0	0,651	14.29	9.4	4.81
8:25		360	7.78	0.65	-55.4	0,515	14.37	8.3	4.81
8:30		360	7.84	0.56	705.0	0,642	14,33	1.2	4.8
8:35		360	7.86	0.00	-108.1	0.642	14,30	2.1	4.91
8:40		360	7.86	0.63	-79.7	0,643	14.33	14,1	4.81
8145	<u></u>	360	7.08	0.52	-21.7	0.642	14.24	14.4	
	+		7.89	0.48	-46,8	0.637	14.71	12.9	4.81
8:50		340		-	-61.9	0.637		13,0	
8:55	+ -	360	7.99	0.45		+		T .	4,81
8 :00		1 360	7.89	0.44	-54.8	0.635	14,53		
4:05	7.5	360	7.90	0.44	155,3	0,636	14,51	9,9	4.81
9:10		npieo		SAMPLING					
Date: U	1/202	0		Time: 9:1	٥				
Sample ID:	me-a	w-606	S	Method of Sar	mple Collection:	grab			
-			etals, MN	A					
Q.C. Sample			Duplicate	Duplicate San	nple ID:				
	-	•	•	·			94		
Q.C. Paramet	 •	1	Well locked?						
Trash picked		Kno							
SIGNED/SAM	ILTEK!	UTUK.	1 Johnar	19U~					

				MOUITOL	ng wen				
			Field	Data Sheet - C	MC Groundwater				
Well Number:	MGO	UD 1	Field Crew: S	charch		Purpose of Samplin	ng:	OMC Quart	erly Sampling
Site:	омс		Field Conditions	Partly	Cloudy	,75°F			
		10		ELL CONDITIO	<u> </u>				
Well Pad		Acceptable	Not Acceptable	Explain					
Protective Casin	ıg	Acteptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain					
Locking Cap		Acceptable	Not Acceptable	Explain:	10 labe	X *			
Well Label (outs	ide)	Acceptable	Not Acceptable	Explain: 3	10 (0000	`			
Well Label (insid	ie)	Acceptable	Not Acceptable	Explain					
J-Plug		Acceptable	Not Acceptable	Explain:	D				<u> </u>
- LAI/11/	2020	Time: 015		Method:	low-flow				
Date: U[4]		= 22.9							
Total Well Depti	* *	- レイ・ひ - 2 Aロ) <i>(</i> -						
Depth to Water		- Dili 1		3.8					
Water Column ((π):	= 23.8	5.	1 volume					
Comments:	ndown	ءا لحم	5110,50		FINAL rate				
	<u></u>	<u> </u>		DBSERVATION					
Odos	None , Lo	W), High	17.7						
Odor:									
Comments:	31ack	toamu	purger	natev					
				LD PARAMET	ERS				
	Volume	Rate	pH (s.u.)	DO	ORP	Specific Conductance	Temp	Turbidity (NTU)	Depth to water (feet)
Time	(gal)	(mL/min)	+/- 0.1 s,u,	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	(°C) +/- 3%	<10 NTU	
10:05	-	220	7.24	137	-147.1	3,673	14/106	22.3	7.40
	 			10 100	15a.4		14.70	11.3	8.24
10:10	$\vdash \vdash \vdash$	360	7.25	0.10	11/2/1	3,60+	15,57	Lil	1.75
10:15	<u> </u>	200	7.27	0,56	-160,4	3,576	4	1411	() () ()
10:20		200	7,26	6.49	-1639	3.560	16.48	19.7	6.92
10:25		200	7,24	0.44					6.67
10:30	1	200	7.21	0.44	-169,9	3:537	16.96	15.4	4,68
10:35	3.0		PLEO]	
10.08	0.0	Jen	1000						
				 		 			
	 -	 -	 	 -	<u> </u>				
	ļ	<u> </u>				 		 	
						 	├	├──	
-	44					<u> </u>	<u> </u>	<u>L</u>	
				SAMPLING					
Date: Le 14	12020			Time: / ^	:35				
•			v	_	nple Collection:	grab			
Sample ID:	141G-141	W-66	UDU						
Analytical Para	ameters: V	ocs, M	etals, MN Duplicate	7 B					
Q.C. Sample 1	Type: N/P	MS/MSD	Duplicate	Duplicate San	nple ID				
Q.C. Paramete	ers: N/P								
Trash picked	up? Y		Well locked? Y	,					
SIGNED/SAM	IPLER:	2nn	i Ida	rcl.				<u> </u>	
		May	J. 32 V.						

Monitoring Well Field Data Sheet - OMC Groundwater Site OMC Quarterly Sampling Purpose of Sampling: Field Crew: W.K.H Well Number: MW-6075 Field Cophilisms: SMMY, 80x 5 Coulm OMC Site: WELL CONDITION Explain: Well Pad eptable Explain: Acceptable **Protective Casing** Explain: otable Well Casing Explain: Locking Cap Explain: Not Acc Well Label (outside) Acceptable Explain: Well Label (inside) Explain: Not Acceptable J-Plug Acceptable PURGE METHOD Method: Time: 153-8 Date: 6/3/20 Total Well Depth (ft) = 9.32 3.45 Depth to Water (ft): 1.0 0.37 Water Column (ft): 1 volume Comments: **OBSERVATIONS** H2S , Fuel Like , Other: High ... Odor: Comments: FIELD PARAMETERS Specific Temp Turbidity Depth to water ORP DO Volume Rate Conductance ρН (s.u.) (NTU) (feet) (°C) Time (mg/L) (mV) (mL/min) (gal) (mS/cmc) <10 NTU +/- 10 mV +/- 3% +/- 10% +/- 0.1 s.u 7.59 3.46 16. 0.25 -116.9 0.403 200 0.42 1543 7.45 3.54 16.83 3.46 -195.4 11.402 0.36 0,50 1548 200 7.44 16.88 5.25 3.46 0.402 290 0.75 0.38 1553 7.44 3,40 5,58 16.84 0.401 0.32 -196.2 1558 1.00 7.44 200 3.46 0,29 -197.6 16.96 0.400 200 7.42 1.25 1603 16.94 3.46 0.400 0.30 -117.7 7.42 1608 1.5D 200 SAMPLING Time: 1610

Sample ID: OML-MW-6075

Method of Sample Collection: grab

Analytical Parameters: VO(S, MEthod), MA

Q.C. Sample Type: MS/MSD Duplicate Duplicate Sample ID:

Q.C. Parameters:

Trash picked up?

SIGNED/SAMPLER:

Well locked?

SIGNED/SAMPLER:

			Fiel	d Data Sheet -	OMC Groundwate	er Site			
Well Number:	MW-6	070		alt G.		Purpose of Samp	— oling:	OMC Qua	arterly Sampling
Site:	ОМС		Field Conditions:	-	75°F				
				WELL CONDIT					
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	sing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (or	·	Acceptable	A APPROVIDE	Explain:	Set per real	-			
Well Label (in:	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain: PURGE METH	OD.				
Date: 06/0	4/28	Time: [37			Lau-flou				
Total Well Der	•	= 27.6		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Case 1 (0-0				
Depth to Wate	- ,	= 3.08							
Water Column	, -	= 24.5		3.9					
Comments:	. ,			1 volume					
Comments.									
				OBSERVATIO	NS				
Odor:	None , Lo	ow , High							
Comments:		Fize	hit =	3.0 %	11/6				
				LD PARAMET	<u> </u>				
	Volume	Rate		DO	ORP	Specific	Temp	Turbidity	Depth to water
Time	(gal)	(mL/min)	pH (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)
1330	01	300	+/- 0.1 s,u,	1.59	76.5	1-679	16.20	UTW 01>	4.3
1335	0.4	300	7.30	1.04	45.3	1.676	14.37	0.0	4.59
1340	0.7	300	7.19	0.65	12.7	1.655	13.94	٥٥	4.68
1345	U	360	7.28	0.45	-36-8	1-627	1379	00	4.70
1350	1,4	300	7.28	0.34	-50.2	1-642	14.01		4-60
1355	1.8	300	7.28	0.27		1.656	19.50	00	4.50
1403	2.2	306	7.24	0.24	-586	_	14.70		4.50
1405	2.6	300	7.22	0.22	-62.3	1.663	13.94		4.50
	0.0	300	1,0-	0.00	-00/	1.670	(> , (0.0	4.50
	 	-				ļ			
 .			-						
				SAMPLING					
Date: 86/6	91126			Time: JUL		_			
Sample ID: 6	MC-MW	-607D		Method of Sam	ple Collection:	2 46			
Analytical Para	meters: Vo	C, MNA	0.35. Mch	rls					
Q.C. Sample Ty		MS/MSD		Duplicate Sam	ple ID:				
Q.C. Paramete	rs:								
Trash picked up	0? Yes		Well locked? Yes	ź .a	11				
SIGNED/SAMP	•		Matt	Henl	d				

			Fiel	d Data Sheet -	OMC Groundwat	er Site			
Well Number:	MW-6	105	Field Crew:	Matt	~ .	Purpose of Same	oling:	OMC Qua	rterly Sampli
Site:	OMC		Field Conditions		sy, 80°F				
Well Pad		addit	Mot Acceptable	WELL CONDIT				· · ·	
Protective Cas	ina	Acceptable	Nol Acceptable	Explain:	NIA				
Well Casing	9	Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:	N/A				
Well Label (ou	tside)	Acceptable	Not Acceptable		Not presen	,			
Well Label (ins	·	Acceptable	Not Acceptable	Explain:	, , , , , , , , , , , , , , , , , , ,	•			
J-Plug		Acceptable	Not Acceptable	Explain:					
				PURGE METH	OD				
Date: 06/8	2/20	Time: 113		Method:	Law-Flass				
Total Well Dep	th (ft)	_	5Z						
Depth to Water	r (ft):	= 5.73	2	20					
Water Column	(ft):	= 24	3	3.9					
Comments:				1 volume					
Odor: /	None L	ow , High		OBSERVATION Like , Other:	NS				
Comments:		•						١,	
Comments.	Black	water	instally u	when Gar	sins. May	have tou	ched 6	₽ β Σ ΕΛ,	
		-		ELD PARAMET					
Time	Volume	Rate	pH (s.u.)	DO	ORP	Specific Conductance	Temp	Turbidity	Depth to wate
	(gal)	(mL/min)	+/- 0.1 s,u,	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
1138	5-1	320	7.60	9.78	-7-8	0.794	14.46	0.5	5.76
143	0.4	320	7.56	11.19	51.5	0.782	13.72	0.0	5.77
3 1415	10	320	7.52	11-56	84.4	0.783	13.60	00	5.78
1153	1,5	320	7.49	11.38	98.0	0.781	13.21	0.0	5.7
168	2.1	326		11.32					5.7
1263	2.5	320	7.47			0 779	13.52		
		 -		11.27	130 -9	0.77(13.52		57
1208	3.0	328	7.4(11.35	149	0.761	13.59		5.7
1213	35	320	7.39	11.30	167.2	0.721	13.43		
1218	4.0	320	7-36	11.39	179.4	0-771	13.24	7.3	5.79
1223	4.3	320	7.35	11.28	186.5	0.769	13.33	0.9	5.7
1558	4.6	320	7.33	11.35	189.2	6.772	13.24	7.6	5.7
				SAMPLING					
Date: Vo (0	2/10			Time: 123	5				
Sample ID:		w- 6105		Method of Sam	ple Collection: (rab			
Analytical Parar	neters: \	ICZ, MNA	, DBS Mct	els, PCB	9				
Q.C. Sample Ty		MS/MSD	Duplicate	Duplicate Sam					
Q.C. Parameter	s:								
Trash picked up			Well locked?	165					
SIGNED/SAMPI	,		9/1.1	Jan Sanda					

				10011110		-	<u> </u>		
144 1141 4	AN ()				OMC Groundwat				
Well Number:	,	10 1	Field Crew: M	** 0 2	025	Purpose of San	npling:	OMC Qua	rterly Sampling
Site:	OMC		Field Conditions:	Sugar WELL CONDIT	83 F				
Well Pad		Acceptable	Not Acceptable	_	N(A	·		•	
Protective Car	sina	Acceptable	Not Acceptable	Explain	/ ۹ (/)				
Well Casing	Ū	Acceptable	Not Acceptable	Explain					
Locking Cap		Acceptable	(Not Acceptable) Explain:	NOT pooser				
Well Label (ou	itside)	Acceptable	Not Acceptable	Explain	Not acres	L			
Well Label (in:	·	Acceptable) Not Acceptable	Explain:	1001 peoser	Τ			
J-Plug	,	Acceptable	Not Acceptable	Explain;					
		лосориаль	<u> </u>	PURGE METH	OD				
Date: 06	102126	Time: 13		Method:	Law-flav				
Total Well Dep	oth (ft)	= 38			VCCD / 1000				
Depth to Wate	r (ft):	= 5.6							
Water Column	(ft):	= 24.A	r	3.9					
Comments:		-1		1 volume					
oommon.									
				OBSERVATIO	NS .		<u> </u>		
Odor:	None), Lo	ow , High		Like , Other:					
Comments:									
			FIL	ELD PARAMET	TERS	<u> </u>			
Time	Volume	Rate	pH (s.u.)	DO (C. of)	ORP	Specific Conductance	Temp	Turbidity	Depth to water
	(gal)	(mL/min)	+/- 0.1 s,u,	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
1336	0.0	300	7.31	2.10	-120.4	1-456	13.76	21.9	5.94
1341	0.5	300	7.26	0.75	-133.8	1.453	13.92	16	5.93
1346	0.9	300	7.25	0.51	· .				5 93
	 				-138.1	1,466	13.67		/ /
1351	1.4	300	7.24	0.36	-140-9	1.467	13.66	16.6	5.93
1356	20	300	7.23	0.33	-142	1.468	13.44	18.2	5.93
1404						[
	<u> </u>						-		
			<u>'</u>						
	<u></u>								
				SAMPLING	3.0		8		
Date: 06/	02/20			Time: 140	5				
		. 10.							
	BM(-M)				լ,	1186			
			Diss. Mct						
Q.C. Sample T	/pe:	MS/MSD	Duplicate	Duplicate Sam	ple ID:				
Q.C. Paramete							-		
Trash picked u	P 469		Well jocked? V	51. /	1				
SIGNED/SAMP	LER:		Weatt	Huld	1				

Field Data Sheet - OMC Groundwater Site Well Number: MW612S Field Crew: 1. Scharch Purpose of Sampling: **OMC Quarterly Sampling** Field Conditions: SUNNY Site: OMC 73° F WELL CONDITION Explain: concrete pad starting to rust on edges Acceptable Well Pad Not Acceptable **Protective Casing** Not Acceptable Well Casing centable Not Acceptable Explain: *Wasz LOS Locking Cap Not Acceptable Explain: Explain: no label on outside Not Acceptable Well Label (outside) Acceptable Well Label (inside) cceptable Not Acceptable Explain: J-Plug Not Acceptable Explain: **PURGE METHOD** Time: 9:28 Method: 10w-flow Date: 6/2/2020 10.89 Total Well Depth (ft) 3.40 Depth to Water (ft):

OBSERVATIONS None Low High , H2S , Fuel Like , Other:

comments: water is very light brown

741

Water Column (ft):

Comments:

				FIL	ELD PARAMET	ERS	· .	-		
Time	Volu (gal)	-	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
			-1	+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	-
8:48			200	6.74	0.51	-97.5	1,130	17.60	7.0	3. 4 4
8:53	\perp		200	6.48	0.25	-95,7	1,140	16,23	3.5	3,44
8:58			200	6.49	0.16	-99.1	1.164	15.91	3.5	3,44
9:03			200	6118	0.11	-93.4	1.168	15.59	2.3	3,44
9:08	Ш		200	6.06	0.09	-90,7	1.169	15.59	2.6	3,44
9:13			200	5.95	0.08	-87.9	1.167	15.55	2.7	3,44
9.18	Ш		200	5,79	0.07	-84.8	1.168	15.70	3,5	3.44
9:23	П		200	5.74	0.06	-83.2	1.164	15.70	3.4	3.44
9:28	Ц		200	5.45	0.06	-81.8	1.164	15,73	1.8	3,44
9:33	Ц		200	5,57	0.05	-81.3	1.167	15:63	2.8	3.44
9:38	1	/	200	5,52	0:06	-79.2	1.165	15.70	3,0	3,44
9:43	4:	5	200	5.47	0.05	÷77,8	1.163	15.67	2.8	

9:45 SAMPLED

SAMPLING

Date: 6/2/2020

Time: 9:45

Sample ID: OMC-MW-6125

Method of Sample Collection: grado

Analytical Parameters: VDCs , Mctall S, MNA

Q.C. Sample Type:

MS/MSD

Ouplicate Sample ID: OM C-MW-6125-R @ 9:55

Q.C. Parameters: VOCS, Metals, MNA

Trash picked up?

SIGNED/SAMPLER:

Well locked?

ing Well Monit 4 Field Data Sheet - OMC Groundwater Site Field Crew: L-Scharch Well Number: MW (125) Purpose of Sampling: **OMC Quarterly Sampling** Site: **OMC** Field Conditions: Sunny 30'F WELL CONDITION Arceptable Explain: rust on edges of concrete pad Well Pad Not Acceptable * Strayed wasps + **Protective Casing** Not Acceptable Explain: Wasp nest @10:30 Well Casing Not Acceptable Explain Explain: WASPS in well cap to well cap is Locking Cap on ulzer Not Acceptable no label on outside Well Label (outside) is broken winger Acceptable Well Label (inside) Not Acceptable Explain J-Plug Not Acceptable Explain: **PURGE METHOD** Date: 4/2/2020 Method: LOW-Flow * purged well on 61312020@8:15 Time: 10:30 Total Well Depth (ft) 26.62 Depth to Water (ft): 1.99 Water Column (ft): 2473 Comments: I foot offset from total well depth **OBSERVATIONS** High , H₂S , Fuel Like , Other: Odor: comments: Slightly foamy purge water; brown purge water wisheen FIELD PARAMETERS Specific Turbidity Volume Rate DO ORP Temp Depth to water Time pН (s.u.) Conductance (gal) (mL/min) (mg/L) (NTU) (°C) (feet) (mS/cmc) +/- 0.1 s,u, +/- 10% +/- 10 mV +/- 3% H- 3% <10 NTU 8:20 200 14.38 -150,3 3.667 100 8:25 0.30 3,6600 -167,0 8:30 2005 0.17 3,656 14.53 27. 8 35 200 0.12 14.10 21.7 8:40 n.to 13.89 250 3.692 13.91 8: 45 6.74 0:09 7,97 ของ 20.5 8:50 200 3,734 13,91 8:55 ይ የ 3 909 LDS 9100 6.54 0.09 3.95 158.1 3,870 9:05 (),09 47 0ء 150 -144.5 9:10 100 6.42 0.09 13.01 200 6,38 0,09 3,960 140,3 9:20 SOMPLED SAMPLING

Date: 6/2/2020

Sample ID: OMC-MW-6120

Method of Sample Collection:

grab

Analytical Parameters: Metals, VDCs, MNA

Q.C. Sample Type: N/Q MS/MSD

Duplicate

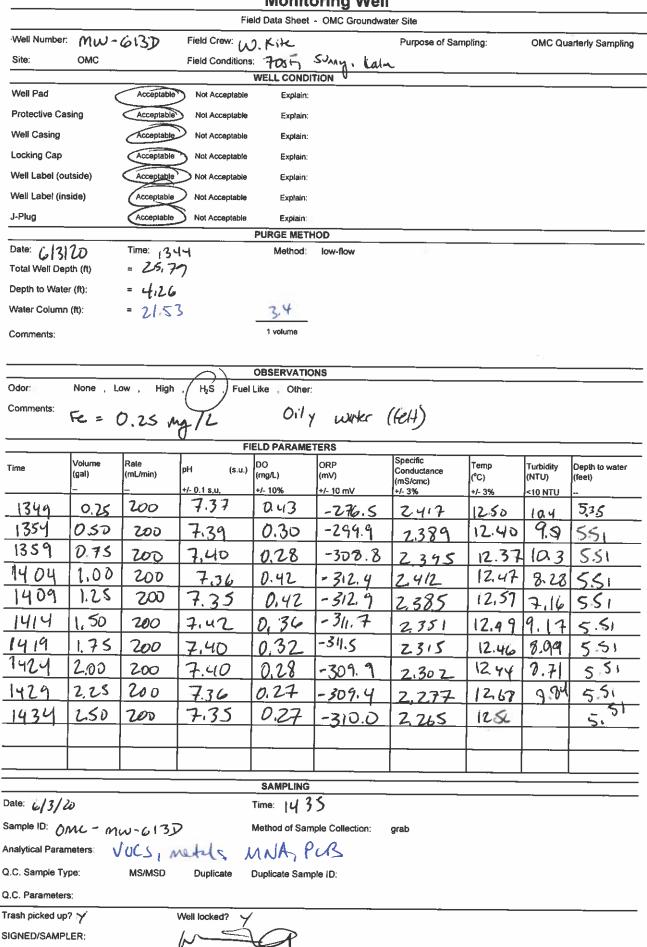
Duplicate Sample ID.

Q.C. Parameters: NIA

Trash picked up?

SIGNED/SAMPLER:

1234 0.5 400 7.18 1.35 180.7 1.408 12.40 2.5 5.4 1.239 0.0 400 7.24 0.56 101.9 1.357 12.21 5.60 5.8 1249 2.0 400 7.18 0.42 5.4 1.362 11.80 4.51 5.3 12.59 2.75 2.00 7.18 0.31 0.5 1.362 11.80 4.51 5.3 12.59 2.75 2.00 7.18 0.31 0.5 1.363 12.17 4.15 9.40 1.304 3.00 200 7.19 0.29 7.5 1.357 12.22 3.75 5.42 1.309 3.25 2.00 7.17 0.29 7.5 1.357 12.22 3.75 5.42 1.309 3.25 2.00 7.17 0.29 7.5 1.357 12.22 3.75 5.42 1.309 3.25 2.00 7.18 0.29 7.5 1.357 12.22 3.75 5.42 1.309 3.25 2.00 7.18 0.29 7.5 1.357 12.22 3.75 5.42 1.309 3.25 2.00 7.18 0.29 7.5 1.357 12.22 3.75 5.42 1.309 3.25 2.00 7.18 0.29 7.5 1.357 12.22 3.75 5.42 1.309 3.25 2.00 7.18 0.29 7.5 1.357 12.22 3.75 5.42 1.309 3.25 2.00 7.18 0.29 7.5 1.357 12.22 3.75 5.42 1.309 3.25 2.00 7.18 0.29 7.5 1.357 12.22 3.75 5.42 1.309 3.25 2.00 7.18 0.29 7.5 1.357 12.22 3.75 5.42 1.309 3.25 2.00 7.18 0.29 7.5 1.357 12.22 3.75 5.42 1.309 3.25 2.00 7.18 0.29 7.5 1.357 12.22 3.75 5.42 1.309 3.25 2.00 7.18 0.29 7.5 1.357 12.22 3.75 5.42 1.309 3.25 2.00 3.75				Fiel		oring Well				
Site OMC	Mell Number	mula	A125			- ONC Gloundwa		olina	OMC Ous	rterly Samolina
Well Pad			<i>ω</i> 133	-		AKKAN.		Jing	ONIO Qua	iterly campling
Protective Casing							atery			
Note Comments Note Not	Well Pad		Acceptable	Not Acceptable	Explain:	**				
Note	Protective Casi	ing	Acceptable	Not Acceptable	Explain:					
Well Label (outside) Acceptable Acceptable Explain:	Well Casing		Acceptable	Not Acceptable	Explain:					
J-Plug	Locking Cap	(Acceptable	Not Acceptable						
J-Plug	Well Label (out	side)	Acceptable	Not Acceptable	Explain:	could not	trul			
Date: 6/3/25 Time: 1,2,2 q Method: low-flow Total Well Depth (I)	Well Label (insi	ide)	Acceptable	Not Acceptable	Explain:	somewhat	مه روس			
Date: 6/3/20 Time: 1229 Method: low-flow Total Well Depth (ft) = 10.9 9	J-Plug		Acceptable							
Total Well Depth (ft) = 10.9 9 9 Depth to Water (ft): = 4,40 Water Column (ft): = 5.54 Comments: OBSERVATIONS	Date: 1-12	12	Time: 133							
Depth to Water (ft): = 4, 40 Water Column (ft): = 6, 54 Comments: None		-			wearea.					
Comments: Comm	•		-	(
OBSERVATIONS OBSE					1.0					
Odor: Comments: None, Low, High, H.S., Fuel Like, Other: Comments: FIELD PARAMETERS Time Volume (gal) PH (s.u.) DO (mg/L) (mg/L			6.31		1 volume					
None Low High H ₂ S Fuel Like Other:	Comments.									
FIELD PARAMETERS Time Volume (gal) PH (s.u.) DO (mg/L) (mS/cmc) (m					OBSERVATION	ONS				
FIELD PARAMETERS Time Volume (gal) Rate (m./min) pH (s.u.) DO (mg/L) (my/L) (my/L) (m/V) (moscmo) (s.u.) (mg/L) (my/L) (my	Odor:	None), L	ow , High	, H₂S , Fuel	Like , Other					
Time Volume (gal) Rate (mU/min) PH (s.u.) DO (mpL) (myL) (Comments:									
Time Volume (gal) Rate (mU/min) PH (s.u.) DO (mpL) (myL) (
Time Volume Rate PH (s.u.) PH (s.u				FI	ELD PARAME	TERS	[Canadia			
1234 0.5 400 7.18 1.35 180.7 1.408 12.40 6.25 5.4 1239 0.0 400 7.24 0.56 101.9 1.357 12.21 5.39 5.3 1244 1.5 400 7.21 0.50 28.8 1.370 12./2 5.60 5.8 1249 2.0 400 7.18 0.42 5.4 1.362 (1.88 4.5) 5.7 1254 2.5 400 7.19 0.34 1.8 1.359 1220 5.16 5.8 1259 2.75 200 7.18 0.31 0.5 1.363 12.17 4.15 9.49 1304 3.00 200 7.19 0.29 7.5 1.357 12.19 3.29 5.40 1309 3.25 200 7.17 0.29 7.5 1.357 12.28 3.75 5.43 Sample ID: OMC-mw613 5 Method of Sample Collection: grab Method of Sample Collection: grab	Time			ρH (s.u.)		1.0	Conductance	100		Depth to water (feet)
1339 0.0 400 7.24 0.56 101.9 1.357 12.21 5.39 5.5 1244 1.5 400 7.21 0.50 28.8 1.370 12.12 5.60 5.8 1249 2.0 400 7.18 0.42 5.4 1.362 11.88 4.51 5.3 1254 2.5 400 7.19 0.34 1.8 1.359 1220 5.16 5.8 1259 2.75 200 7.18 0.33 0.5 1.363 12.17 4.15 4.4 1304 3.00 200 7.19 0.29 7.5 1.357 12.19 3.21 5.4 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.35 5.4 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.35 5.4 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.35 5.4 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.35 5.4 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.35 5.4 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.35 5.4 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.35 5.4 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.35 5.4 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.35 5.4 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.35 5.4 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.35 5.4 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.35 5.4 1309 3.25 200 7.18 0.30						7	+/- 3%	1		-0
1244 [.5 40) 7.21 0.50 28.8 1.370 12./2 5.60 5.8 1249 2.0 400 7.18 0.42 5.4 1.362 11.87 4.51 5.3 1254 2.5 400 7.15 0.34 1.8 1.359 1220 5.16 5.8 1257 2.75 200 7.18 0.33 0.5 1.363 12.17 4.15 9.47 1304 3.00 200 7.19 0.29 3.7 1.357 12.19 3.21 547 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.75 5.47 Date: 6/3/20 Time: 1315 Sample ID: OMC-mu0613 5 Method of Sample Collection: grab Analytical Parameters: VOCS, methods, MNA		4 -			1.35		1.408	12.40	6.25	5.40
1249 2.0 400 7.18 0.42 5.4 1.362 11.88 4.51 5.7 1254 2.5 400 7.19 0.34 1.8 1.359 1220 5.16 5.8 1257 2.75 200 7.18 0.33 0.5 1.363 12.17 4.15 9.49 1304 3.00 200 7.19 0.29 3.7 1.357 12.19 3.21 543 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.75 543 Date: 6/3/20 Sample ID: OMC-mu613 S Method of Sample Collection: grab Analytical Parameters: VOCS, metals, MNA	13239	0.0	400	7.24	0.56	101.9	1.357	1221	_	5,50
1254 2-5 400 7.19 0.34 1.8 1.359 1220 5.16 5.8 1257 2.75 200 7.18 0.33 0.5 1.363 12.17 4.15 9.46 1304 3.00 200 7.19 0.29 3.7 1.357 12.19 3.21 5.43 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.75 5.43 Date: 6/3/20 Time: 1315 Method of Sample Collection: grab Analytical Parameters: VOCS, metals, MNA	1244	1.5	400	7.21	0.50	28.8	1,370	12.12	5.60	5.50
1254 2.5 400 7.19 0.34 1.8 1.359 1220 5.16 5.8 1257 2.75 200 7.18 0.33 0.5 1.363 12.17 4.15 9.49 1304 3.00 200 7.19 0.29 3.7 1.357 12.19 3.21 543 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.75 5.43 Date: 6/3/20 Time: 1315 Method of Sample Collection: grab Analytical Parameters: VOCS, metals, MNA	1249	2.0	400	7.18	0,42	5.4	1.362	11.88	4.51	5,70
1259 2.75 200 7.18 0.33 0.5 1.363 12.17 4.15 9.46 1304 3.00 200 7.19 0.29 3.7 1.357 12.19 3.21 5.42 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.75 5.42 SAMPLING Date: 6/3/20 Time: 1315 Method of Sample Collection: grab Analytical Parameters: VOCS, methols, MNA	1254	25	400		0.34	1.8	1.359	1220	5:16	5.81
1304 3.00 200 7.19 0.29 3.7 1.357 12.19 3.21 5.43 1309 3.25 200 7.18 0.29 7.5 1.357 12.28 3.75 5.43 12.28 3.75 12.28 3.75 5.43 12.28 3.75 12.28 3.75 5.43 12.28 3.75 12.28 3.75 5.43 12.28 3.75 12.28 3.75 5.43 12.28 3.75 12.28 3.75 5.43 12.28 3.75 12.28 3.75 5.43 12.28 3.75 12.28 3.75 5.43 12.28 3.75 12.28 3.75 5.43 12.28 3.75 12.28 3.75 5.43 12.28 3.75 12.28 3.75 5.43 12.28 3.75 12.28 3.75 5.43 12.28 3.75 12.28 3.75 5.43 12.28 3.75 12.28 3.75 5.43 12.28 3.75 12.28 3.75 5.43 12.28 3.75 12		1,75	+	1	- 15			12.17	4.15	9.43
309 3,25 200 7,18 0,29 7,5 1.357 12.28 3,75 5,47		_	+		F					
SAMPLING Date: 6/3/20 Time: 1315 Sample ID: OMC-mw6135 Method of Sample Collection: grab Analytical Parameters: VOCS, methods, MNA		<u> </u>	_							· ·
Date: 6/3/20 Time: 1315 Sample ID: OMC- MW613 S Method of Sample Collection: grab Analytical Parameters: VOCS, methods, MNA	1001	7.03	-	4-118	0, 01	1713	11797	12.08	7, 10	3.78
Date: 6/3/20 Time: 1315 Sample ID: OMC- MW613 S Method of Sample Collection: grab Analytical Parameters: VOCS, methods, MNA							 		 	
Date: 6/3/20 Time: 1315 Sample ID: 0MC- mw613 S Method of Sample Collection: grab Analytical Parameters: VOCS, metals, MNA			-			- ::				
Date: 6/3/20 Time: 1315 Sample ID: OMC- MW613 S Method of Sample Collection: grab Analytical Parameters: VOCS, methods, MNA										
Date: 6/3/20 Time: 1315 Sample ID: OMC- MW613 S Method of Sample Collection: grab Analytical Parameters: VOCS, methods, MNA										
Sample ID: OMC-mw6135 Method of Sample Collection: grab Analytical Parameters: VOCS, metals, MNA					SAMPLING)				
Analytical Parameters: VOCS, metals, MNA	Date: 6/3/	120			Time: (31)	5				
· · · · · · · · · · · · · · · · · · ·	Sample ID: 0/	NC-mi	06135		Method of Sa	mple Collection:	grab			
	Analytical Parar	neters: \	TUCS, me	tals, Mi	NA .					
2.C. Sample Type: MS/MSD Duplicate Duplicate Sample ID:			MS/MSD	•		nple (D:				
Q.C. Parameters:				·						
Frash picked up? Y Well locked?				Well locked?	(
SIGNED/SAMPLER:		•	1. 1	< \/	₹					



	1				OMC Groundwater	Purpose of Samplin	ng: (OMC Quart	erly Sampling
Vell Number:			Field Crew: [, § Field Conditions:	Scharc	1 1090F	apposo or ourie	· a ·		,
Site:	OMC			VELL CONDITION					
Vell Pad		Asceptable	Not Acceptable	Explain:					
Protective Casi	ng	Acceptable	Not Acceptable	Explain:					
Vell Casing		Acceptable	Not Acceptable	Explain:					
ocking Cap		Acceptable	Not Acceptable	Explain:					
Vell Label (out	side)	Acceptable	Not (cceptable	Explain 1	o label c	noutsid	R		
Vell Label (insi	ide)	Acceptable	Not Acceptable	Explain					
J-Plug		Acceptable	Not Acceptable	Explain:					
Data: [012]	7:00	Time: [D]		PURGE METHO Method	low-flow				
Date: (() (ろ) Total Well Dep	7570 th (ft)	= 10.85				10			
Depth to Water		= 3.03							
Water Column		= 7/77	•	1.2					
Comments:		13		1 volume					
Comments.									
				OBSERVATIO	NS				
Odor:	None, L	ow , High	, H₂S , Fuel	Like Other:					
Comments:	CLEON	DESCA	e wate	97					
	CIECU	7019							
			FI	ELD PARAMET	TERS				
		<u></u>		Too	OPP	Specific	Temp	Turbidity	Depth to water
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Conductance (mS/cmc)	(°C)	(NTU)	Depth to water (feet)
Time		(mL/min)	pH (s.u.)	(mg/L) +/- 10%	(mV) +/- 10 mV	Conductance (mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
10:24		(mL/min) - 210	pH (s.u.) +/- 0.1 s,u,	(mg/L) +/- 10%	(mV)	Conductance (mS/cmc) +/-3%	(°C) +/- 3%	(NTU) <10 NTU	(feet) -3.14
10:24		(mL/min) - 210 210	pH (s.u.) +1-0.1 s,u. 6,99	(mg/L) +/- 10% 1 + 31	(mV) +/- 10 mV 94, 2	Conductance (mS/cmc) +/-3% 0,813 0.789	14,04 14,11	(NTU) <10 NTU 2.6	3.14 3.14
10:24 10:29 10:34		(mL/min) - 210 210 210	pH (s.u.) +/-0.1 s.u. 6,99 6,72 6,70	(mpl.) +1.10% 1.31 ().40 0.24	(mV) +/- 10 mV 94, 2 29, 1 -33, 7	Conductance (mS/cmc) +1-3% 0.813 0.789 0.767	14.04 14.11 13.99	(NTU) <10 NTU 2,6 0,0	3.14
10:24 10:29 10:34 10:39		(mL/min) - 210 210	pH (s.u.) +1-0.1 s.u. 6,99 6,72 6,70 4,75	(mg/L) +1/- 10% 1+31 0,40 0.24 0,16	(mv) -1-10 mv -1-10 mv -29.1 -33.7 -12.8	0.813 0.789 0.747	14,04 14,11 13,99 13,83	(NTU) <10 NTU 2.6 0.0 0.0	3.14 3.14 3.14 3.14
10:24 10:29 10:34 10:39		(mL/min) - 210 210 210	pH (s.u.) +/-0.1 s.u. 6,99 6,72 6,70	(mpl.) +1.10% 1.31 ().40 0.24	(mV) +/- 10 mV 94, 2 29, 1 -33, 7	Conductance (mS/cmc) +1-3% 0.813 0.789 0.767	14,04 14,11 13,99 13,93 13,74	(NTU) <10 NTU 2.6 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14
10:24 10:29 10:34	(gal)	(mL/min) - 210 210 210 210	pH (s.u.) +1-0.1 s.u. 6,99 6,72 6,70 4,75	(mg/L) +1.10% 1.31 0.40 0.24 0.16 0.14 0.17	(mv) -1. 10 mv 94, 2 29, 1 -33, 7 -102.8 -67.8 -72.1	Conductance (mS/cmc) +1-3% 0.813 0.789 0.747 0.749 0.737 0.728	14,04 14,11 13,99 13,93 13,74 13,83	(NTU) <10 NTU 2.6 0.0 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14 3.14
10:24 10:29 10:34 10:39 10:44 10:49	(gal)	(mL/min) 210 210 210 210 210	pH (s.u.) +1-0.1 s,u. 6,99 6,72 6,70 4,75 6,76	(mg/L) +1.10% 1.31 0.40 0.24 0.16 0.14	(mv) -1.10 mv -1.10 mv -29.1 -33.7 -1.2.8 -1.2.8 -72.1 -70.6	Conductance (mS/cmc) +1-3% 0,813 0.789 0.767 0.744 0.737 0.728 0.728	14.04 14.11 13.99 13.83 13.74 13.83 13.78	(NTU) <10 NTU 2.6 0.0 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14 3.14 3.14
10:24 10:29 10:34 10:39 10:44 10:49 10:54	(gal)	(mL/min)	ph (s.u) +1-0.1 s,u 6,99 6,72 6,70 4,75 6,76	(mg/L) +1.10% 1.31 0.40 0.24 0.16 0.14 0.17	(mv) -1. 10 mv 94, 2 29, 1 -33, 7 -102.8 -67.8 -72.1	Conductance (mS/cmc) +1-3% 0.813 0.789 0.747 0.749 0.737 0.728	14,04 14,11 13,99 13,93 13,74 13,83	(NTU) <10 NTU 2.6 0.0 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14 3.14 3.14
10:24 10:29 10:34 10:39 10:44 10:49 10:54 10:59	(gal)	(mL/min) 210 210 210 210 210 210 210 210 210	ph (s.u.) +1.0.1 s.u. 6,99 6,72 6,70 6,76 6,76 6,76 6,76	(mg/L) +1/10% 1.31 0.40 0.24 0.16 0.14 0.17 0.12	(mv) -1.10 mv -1.10 mv -29.1 -33.7 -1.2.8 -1.2.8 -72.1 -70.6	Conductance (mS/cmc) +1-3% 0,813 0.789 0.767 0.744 0.737 0.728 0.728	14.04 14.11 13.99 13.83 13.74 13.83 13.78	(NTU) <10 NTU 2.6 0.0 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14 3.14 3.14
10:24 10:29 10:34 10:39 10:44 10:49 10:54	(gal)	(mL/min) 210 210 210 210 210 210 210 210	ph (s.u.) +1.0.1 s.u. 6,99 6,72 6,70 6,76 6,76 6,76 6,76	(mg/L) +1/10% 1.31 0.40 0.24 0.16 0.14 0.17 0.12	(mv) -1.10 mv -1.10 mv -29.1 -33.7 -1.2.8 -1.2.8 -72.1 -70.6	Conductance (mS/cmc) +1-3% 0,813 0.789 0.767 0.744 0.737 0.728 0.728	14.04 14.11 13.99 13.83 13.74 13.83 13.78	(NTU) <10 NTU 2.6 0.0 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14 3.14 3.14
10:24 10:29 10:34 10:39 10:44 10:49 10:54 10:59	(gal)	(mL/min) 210 210 210 210 210 210 210 210 210	ph (s.u.) +1.0.1 s.u. 6,99 6,72 6,70 6,76 6,76 6,76 6,76	(mg/L) +1/10% 1.31 0.40 0.24 0.16 0.14 0.17 0.12	(mv) -1.10 mv -1.10 mv -29.1 -33.7 -1.2.8 -1.2.8 -72.1 -70.6	Conductance (mS/cmc) +1-3% 0,813 0.789 0.767 0.744 0.737 0.728 0.728	14.04 14.11 13.99 13.83 13.74 13.83 13.78	(NTU) <10 NTU 2.6 0.0 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14 3.14 3.14
10:24 10:29 10:34 10:39 10:44 10:49 10:54 10:59	(gal)	(mL/min) 210 210 210 210 210 210 210 210 210	ph (s.u.) +1.0.1 s.u. 6,99 6,72 6,70 6,76 6,76 6,76 6,76	(mg/L) +1/10% 1.31 0.40 0.24 0.16 0.14 0.17 0.12	(mv) -1.10 mv -1.10 mv -29.1 -33.7 -1.2.8 -1.2.8 -72.1 -70.6	Conductance (mS/cmc) +1-3% 0,813 0.789 0.767 0.744 0.737 0.728 0.728	14.04 14.11 13.99 13.83 13.74 13.83 13.78	(NTU) <10 NTU 2.6 0.0 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14 3.14 3.14
10:24 10:29 10:34 10:39 10:44 10:49 10:54 10:59	(gal)	(mL/min) 210 210 210 210 210 210 210 210 210	ph (s.u.) +1.0.1 s.u. 6,99 6,72 6,70 6,76 6,76 6,76 6,76	(mg/L) +10% 1:31 0:40 0.24 0.16 0.17 0.17 0.11	(mv) -1.10 mv -1.10 mv -1.20 -1.2	Conductance (mS/cmc) +1-3% 0,813 0.789 0.767 0.744 0.737 0.728 0.728	14.04 14.11 13.99 13.83 13.74 13.83 13.78	(NTU) <10 NTU 2.6 0.0 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14 3.14 3.14
10:24 10:39 10:39 10:44 10:49 10:54 10:59	(gal)	(mL/min) 210 210 210 210 210 210 210 210 210	ph (s.u.) +1.0.1 s.u. 6,99 6,72 6,70 6,76 6,76 6,76 6,76	(mg/L) +1/10% 1:31 0:40 0.24 0.16 0.17 0.17 0.11	(mv) -1-10 mv -1-10 mv	Conductance (mS/cmc) +1-3% 0,813 0.789 0.767 0.744 0.737 0.728 0.728	14.04 14.11 13.99 13.83 13.74 13.83 13.78	(NTU) <10 NTU 2.6 0.0 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14 3.14
10:24 10:39 10:39 10:49 10:59 11:05	(gal)	(mL/min) 210 210 210 210 210 210 210 210 SAM	pH (s.u) +1.0.1 s.u. 6.99 6.70 6.70 6.76 6.76 6.76 6.77	(mg/L) +/- 10% 1-31 0.40 0.24 0.16 0.17 0.17 0.11 SAMPLING Time: '	(mv) -1, 10 mv -1, 10 mv -1, 10 mv -29, 1 -1, 10, 10 -1, 10, 10 -1, 10, 10 -72, 1 -740, 10 -740,	Conductance (mS/cmc) +1-3% 0.813 0.789 0.747 0.747 0.737 0.728 0.728 0.720	14.04 14.11 13.99 13.83 13.74 13.83 13.78	(NTU) <10 NTU 2.6 0.0 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14 3.14 3.14
10:24 10:39 10:39 10:49 10:59 10:59 11:05	(gal)	(mL/min) 210 210 210 210 210 210 210 210 210	pH (s.u) +1-0.1 s,u 6,99 6,72 6,70 6,75 6,76 6,76 6,77	(mg/L) +/- 10% 1 + 31 0 - 40 0 - 24 0 - 14 0 - 12 0 - 11 0 - 11 Time: \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	(mv) -1-10 mv -1-10 mv	Conductance (mS/cmc) +1-3% 0,813 0.789 0.767 0.744 0.737 0.728 0.728	14.04 14.11 13.99 13.83 13.74 13.83 13.78	(NTU) <10 NTU 2.6 0.0 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14 3.14 3.14
10:24 10:39 10:39 10:49 10:59 10:59 11:05	(gal)	(mL/min) 210 210 210 210 210 210 210 210 210	pH (s.u) +1.0.1 s.u. 6.99 6.70 6.70 6.76 6.76 6.76 6.77	(mg/L) +/- 10% 1 + 31 0 - 40 0 - 24 0 - 14 0 - 12 0 - 11 0 - 11 Time: \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	(mv) -1, 10 mv -1, 10 mv -1, 10 mv -29, 1 -1, 10, 10 -1, 10, 10 -1, 10, 10 -72, 1 -740, 10 -740,	Conductance (mS/cmc) +1-3% 0.813 0.789 0.747 0.747 0.737 0.728 0.728 0.720	14.04 14.11 13.99 13.83 13.74 13.83 13.78	(NTU) <10 NTU 2.6 0.0 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14 3.14 3.14
10:24 10:39 10:39 10:49 10:59 10:59 11:05	(gal)	(mL/min) 210 210 210 210 210 210 210 210 MW-let Metals	pH (s.u) +1-0.1 s,u 6,99 6,72 6,70 6,75 6,76 6,76 6,77	(mg/L) +/- 10% 1 + 31 0 - 40 0 - 24 0 - 14 0 - 12 0 - 11 0 - 11 Time: \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	(mv) +/- 10 mv 94, 2 29, 1 -33, 7 -12, 8 -47, 8 -72, 1 -76, 6 -77, 9	Conductance (mS/cmc) +1-3% 0.813 0.789 0.747 0.747 0.737 0.728 0.728 0.720	14.04 14.11 13.99 13.83 13.74 13.83 13.78	(NTU) <10 NTU 2.6 0.0 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14 3.14 3.14
10:24 10:39 10:39 10:44 10:54 10:59 11:05 Date: (p1: Sample ID: (Analytical Pai	(gal) 3/7020 MC-1 rameters: N	(mL/min) 210 210 210 210 210 210 210 210 210 MW-101 Metals Ms/MsD	15 VOCS, 1	(mg/L) +/- 10% 1-31 0-40 0-24 0-14 0-12 0-11 0-11 Method of Sa	(mv) +/- 10 mv 94, 2 29, 1 -33, 7 -12, 8 -47, 8 -72, 1 -76, 6 -77, 9	Conductance (mS/cmc) +1-3% 0.813 0.789 0.747 0.747 0.737 0.728 0.728 0.720	14.04 14.11 13.99 13.83 13.74 13.83 13.78	(NTU) <10 NTU 2.6 0.0 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14 3.14 3.14
10:24 10:39 10:39 10:49 10:59 10:59 11:05	(gal) 3/7020 MC-1 Type: N/A ters: N/A	(mL/min) 210 210 210 210 210 210 210 210 210 MW-101 Metals Ms/MsD	15 VOCS, 1	(mg/L) +/- 10% 1-31 0-40 0-24 0-14 0-12 0-11 0-11 Method of Sa	(mv) +/- 10 mv 94, 2 29, 1 -33, 7 -12, 8 -47, 8 -72, 1 -76, 6 -77, 9	Conductance (mS/cmc) +1-3% 0.813 0.789 0.747 0.747 0.737 0.728 0.728 0.720	14.04 14.11 13.99 13.83 13.74 13.83 13.78	(NTU) <10 NTU 2.6 0.0 0.0 0.0 0.0	3.14 3.14 3.14 3.14 3.14 3.14 3.14

			Field	7	ring Well OMC Groundwater	Site			
Well Number:	NAVAL CATE	10		Schard		Purpose of Samplin	ng	OMC Quart	terly Sampling
Site:	OWC		Field Conditions:	- .					
				VELL CONDITION					
Vell Pad		Acceptable	Not Acceptable	Explain					
Protective Casi	ng	Acceptable	Not Acceptable	Explain					
Well Casing		Acceptable	Not Acceptable	Explain					
Locking Cap		Adceptable	Not Acceptable	Explain					
Well Label (out	side)	Acceptable	Not Acceptable	Explain: V	10 label				
Well Label (insi	ide)	Acceptable	Not Acceptable	Explain					
J-Plug		Adceptable	Not Acceptable	Explain:					
20101	1020	Time: // i/		PURGE METHO Method:	low-flow				
Date: (2131 Total Well Dep	-	= 29,7	_	TOTAL COLUMN	tott hour				
Depth to Water		= 7.98	0						
Water Column		= 26.8		4.3					
	1.4.	ra.n		1 volume					
Comments:									
_	<u> </u>			OBSERVATION	NS				
Odor: Comments:		og , High	y Water	•		no water	and r	eads	usted to
			FI	ELD PARAMET	ERS				
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/= 3%	Temp (°C) +/- 3%	Turbidity (NTU) <10 NTU	Depth to water (feet)
11:22		240	7.50	8.20	-1,0	3,844	13.24	2-1	9,56
11:00	+ + -	2.10	7.50	8.18	-10.9	3,854	13.25	2.5	9,56
11.70		240	7.56	8,20	-111.3	3.863	14.33	14.9	10,73
11.37	++-	240	7,57	0.26	-115,7	3.874	H134	14,8	14,01
		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 		T	-49.1	3.821		3/0/1	14.10
11:42	\ 	200	7.71	8.45	 • • • • • • • • • • • • • • • • • • •	1		40.0	
11:47	-	150	7.72	8.51	-16.1	3.794	14,59		11,60
17:04	₩—	200	8.34	0113	77,1	4.143	15.02		
12:08	11_	200	7.81	1.53	91.7		14.55	 	14,01
12:13	11	200	7.69	0.10	61.6	4.456	13.46	1	
12:18	Ш_	200	7.66	0.06	-8.8	4.477	13.57		118.46
12:13		200	7.64	0.05	-74.2	4,4++	13,45	19.3	 -
12128	V	240	7.56	0.03	-119.3	4.427	13.29	19,4	22.51
				SAMPLING	<u> </u>				
Date: (2) (3	12020			Time: 11 ;	15				
		11/-1214	8	•	mple Collection:	grab	1	1. 0	?
Sample ID: A	ntio in			IA Di			اح	H: 3)
Sample ID:	ametere 1	ሃር ' W L '		11 L/II					
Analytical Par					nole ID:				
Analytical Par Q.C. Sample	Type: N(A	MS/MSD	tus, Mk Duplicate	Duplicate San	nple ID:				
Analytical Par	Type: NIA ters: NIA	MS/MSD		Duplicate San	nple ID:			_	

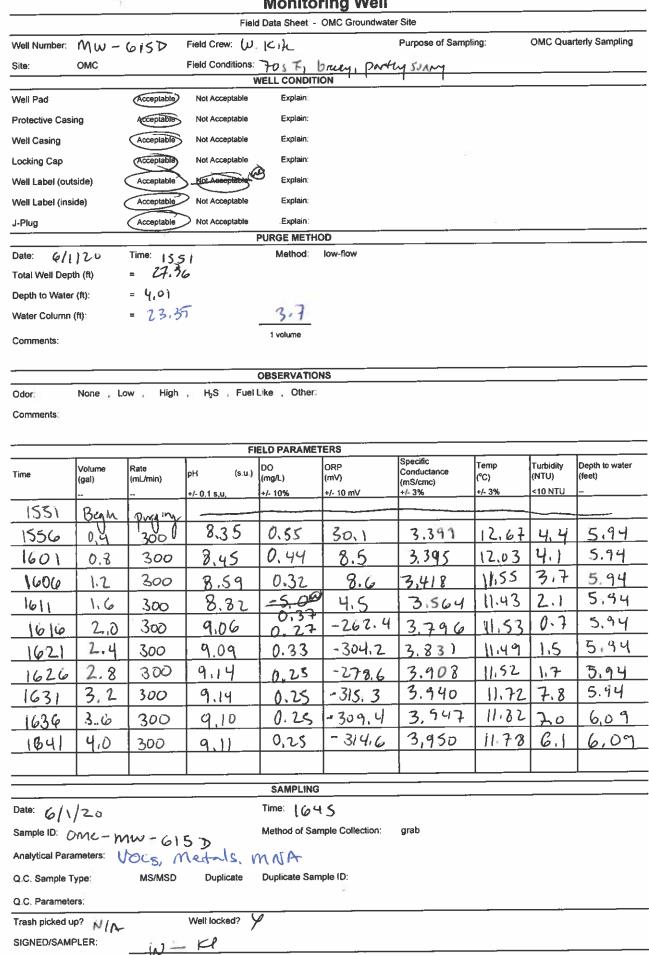
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Monitoring Well										
Field Data Sheet - OMC Groundwater Site										
Well Number: 1	MNC		Field Crew:			Purpose of Sampli	ng:	OMC Quart	erly Sampling	
Site:	омс		Field Conditions:	CIOUCLY						
Well Pad		Acceptable	Not Acceptable	VELL CONDITI Explain:	<u></u>		 _	····		
Protective Casir	10	Acceptable	Not Acceptable	Explain:						
Well Casing	פי	Acceptable	Not Acceptable	Explain:						
Locking Cap		Acceptable	Not Acceptable	Explain:	C	FEE PG.	7			
Well Label (outs	side)	Acceptable	Not Acceptable	Explain:	,					
Well Label (insid		Acceptable	Not Acceptable	Explain:						
J-Plug		Acceptable	Not Acceptable	Explain:						
				PURGE METH						
Date:		Time:		Method:	low-flow					
Total Well Dept		=				SEEPGI.	1			
Depth to Water		=								
Water Column ((1 4) -	-		1 volume						
Comments:										
			<u> </u>	OBSERVATIO						
Odor:	None ,	Low , High		Like , Other:						
Comments:	₩ Lance	mad N.	rate due	- Arau	udown					
	₩ IOW	incry +10m	ruit auc	-40 mm						
			FI	ELD PARAME		Specific	Tame	Turkidis.	Depth to water	
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Conductance (mS/cmc)	(°C)	Turbidity (NTU)	(feet)	
141.00	-	-	+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	77 71	
12:33		240	7.40	0.09	121.+	4.363	13.52	19,6	22.71	
12:38		240	7.46	0.08	-105.6	4.412	13 41	24.4	24.97	
12:43		240	7.42	0-11	-88.8	4,429	13,62		24.93	
12:48	$oxedsymbol{oxedsymbol{oxedsymbol{eta}}}$	260	7.40	0.44	-72.5	4,449	13,92	22.9	24.93	
12:53		240	7,33	1.06	-p.o	4,450	13.87	25:5	24,93	
12:58		240	7.24	2,00	35.9	4.416	13,84		24.93	
13:03		240	7.23	5.32	90,9	4446	13.99	1800	24.93	
13:08		<200	7.33	7.00	273.1	4.513	16.48	3,3	25.2 +	
13:13		<200	7.35	6.71	232.6	4.518	16.74	2.9	2500 ¹⁰ 124	
13:18		<200	7.41	6,13	248,4	4,507	17,46	2.4	22.5	
13:23	+ +	<200	7.47	5.96	264.7	4.528	17.98	5,9	21.7	
	1	< 200	7.54	4,50	299.6	4,544	18.59		20.2	
13:28			1.21	SAMPLING		1 1.0 1				
				Time:	<u> </u>		-			
					mple Collection:	grab				
Sample ID:				Mediod of od	ingro outdoudin	\$,	Su	00 1		
Analytical Para				Double - t - C	maia ID:		9 30	48' '		
Q.C. Sample T	уре:	MS/MSD	Duplicate	Duplicate Sar	npie IU:					
Q.C. Paramete			6:				-	-		
Trash picked u		W.	Well locked?	1						
SIGNED/SAM	PLER:	1171	N SYCh	Maro	<i>→</i>				_ _	

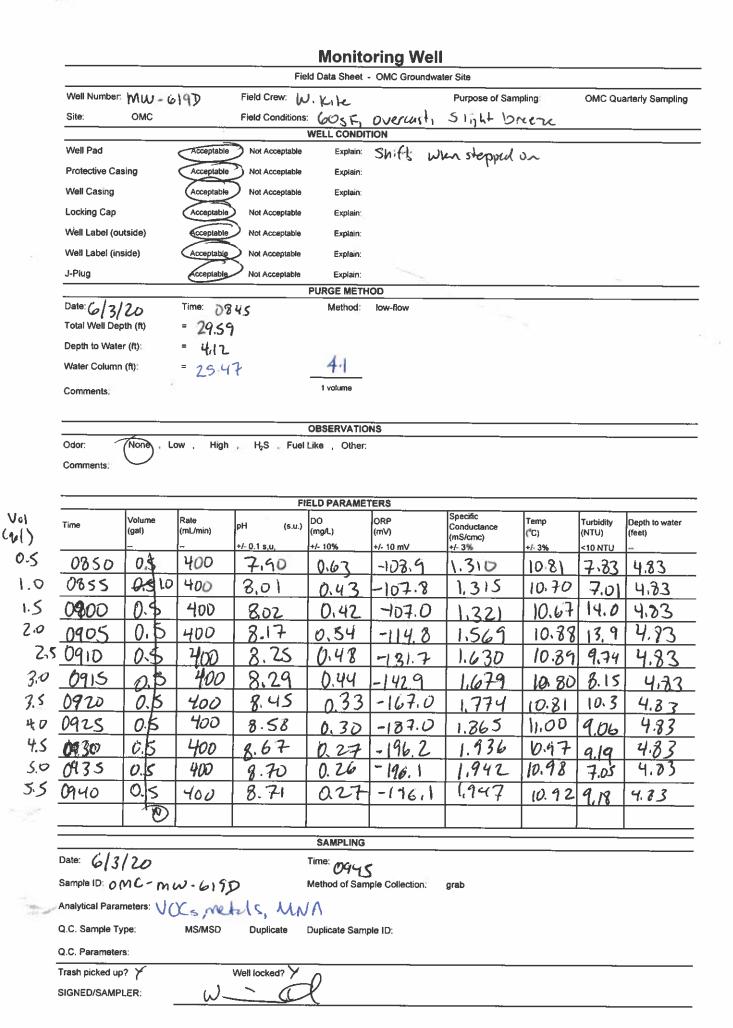
					ring Well OMC Groundwater	Site			
Vell Number: 🕴	Assit . II	<u> </u>		Scharc		Purpose of Sampli	ng:	OMC Quart	erly Sampling
	OWC		Field Conditions:						
olle:				ELL CONDITA					
Well Pad		Acceptable	Not Acceptable	Explain					
Protective Casin	ng	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:	Se-	e pg.	1		
Locking Cap		Acceptable	Not Acceptable	Explain:		, 0.	•		
Well Label (outs	ide)	Acceptable	Not Acceptable	Explain:					
Well Label (insid	de)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:			<u> </u>		
12				PURGE METHO					
Date:		Time:		Method:	low-flow				
Total Well Dept		=							
Depth to Water		_			>	upg.	1		
Water Column (ii):	=		1 volume					
Comments:				TOTALITY					
				OBSERVATIO			.		
Odor:	None . Lo	ow , High	, H₂S , Fuell		113		.		100
	1 00			LD PARAMET	campled TERS				
Time	Volume	Rate	pH (\$.u.)	DO (mg/L)	ORP (mV)	Specific Conductance	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
	(gal)	(mL/min)	+/- 0.1 s,u,	+/- 10%	+/- 10 mV	(mS/cmc) +/- 3%	+1- 3%	<10 NTU	
13:33		<200	7.52	3 38	323.3	4.5514	18:25	6.4	20,40
13:38		4200	7.49	2.29	341.3	4.55	18.31	6.5	18.90
13:43		<200	7.44	1.89	358.6	4.575	17.90	4.5	17.90
13:49		4200	7.38	0.97	371.7	4.574	17.48	4.8	17.29
13.51	 	1.00	7,35_	0,62	379,0	4,562	17,37	2,7	17.20
13,54	 	< 200	7.35	0.57	382 2	4.559	17.37		16.50
	┼	3955		0.46	386.1	4.554	17.32		16. 5
13:57	 	< 200	7.35		3997	4.558	17,3		T .
14:00	-	< 2000	7.37	0.34		ļ	 	 •	16.50
14:03		4200	7.38	0.32	390.3	4,558	17.31	$\overline{}$	14.50
14:06	<u> </u>	1200	7.39	0.27	392.1	4,561	17.31	3.9	10 5
14:09	V	<200	7,42	0.23	394.3	4.564	17/23	2.9	15.8
14:15	10.0	SAMPU	<u> </u>		<u> </u>		<u> </u>		
			TOT BU	SAMPLING					
Date:				Time:					
Sample ID:				Method of Sai	mple Collection:	grab	5	ور ا	
Analytical Para	meters						9	er pe	Γ'
Q.C. Sample T		MS/MSD	Duplicate	Duplicate San	nple ID:				
Q.C. Paramete	ers:								
Trash picked u		()	Well locked?	<u> </u>		<u> </u>			
SIGNED/SAM		AM	a Wi	WIA					
		171 171		7 -1/	1				

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	_		Fiel	d Data Sheet -	OMC Groundwal	ter Site			
Vell Number. Site:	ONW-6	158		Kite		Purpose of Sampl	ing:	OMC Quar	terly Sampling
				WELL CONDIT	ION				
Vell Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	sing	Acceptable	Not Acceptable	Explain:					
Vell Casing		Acceptable	Not Acceptable	Explain:					
ocking Cap		Acceptable	Not Acceptable	Explain:					
Vell Label (ou	tside)	Acceptable	Not Acceptable	Explain:					
Vell Label (in:	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:					
				PURGE METH					<u> </u>
Date: 6/1/ Fotal Well Der		Time: 4 = \\.\4	55	Method:	low-flow				
Depth to Wate		= 4.49)					6	
Vater Column		= 694		1.1					
	177	v		1 volume					
Comments:									
			·	OBSERVATIO	NS				
Odor:	None L	ow , High	, H₂S , Fuel	Like , Other:					
Comments:									
			FI	ELD PARAME	ή	Specific		<u> </u>	
ſime	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
		<u> -</u>	+/- 0.1 <u>s,u,</u>	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	-,:
1455_	Begin	pmy	-6,9230 -						
1500	0,4	300	6.91	0,95	-77.8	0.668	13.13	4.2	4,55
1505	0.7	300	699	0,51	-36.8	0.657	13,35	7.6	4.55
1510	1.2	300	2.09	0.43	-96.2	0.656	13.17	3,5	4,55
1515	1.6	300	7,20	0.40	-94.4	0.656	12.92	4.3	4.53
1520	2.0	300	7.18	0.40	-94.2	0.656	12.94	4.2	4,53
1525	2.4	300	7.21	0.40	- 91.4	0.654	12.81	8.8	4,55
	† 								
-	 								
	+	1		 	 	-	-		
	-			 		-	 		
	-	 	 		 		 	-	
	<u> </u>		<u> </u>	<u> </u>			<u> </u>		
			<u> </u>	SAMPLING	***				
Date: 6/1	•	1w-65	c	Time: 153 Method of Sa	mple Collection:	grab			
		_				-			
analytical Par Q.C. Sample		MS/MSD	Pedals M Duplicate	Duplicate Sar	nole ID:				
Q.C. Sample		MOUND	Dahirate	Daproute Car					
Trash picked			Well locked?	124 124					
SIGNED/SAM		1 1							



		.	<u>.</u>		oring We				
				_	- OMC Ground	water Site			. <u>.</u>
Well Number:		6195		7. Kitc	a resident	Purpose of Sam	pling:	OMC Qu	arterly Sampling
Site:	OMC	<u> </u>	Field Conditions	WELL CONDI		breezy			
Well Pad		Acceptable	Not Acceptable	Explain:	TION	<u> </u>		<u>-</u>	
Protective Cas	sing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
ocking Cap		Acceptable	Not Acceptable	Explain:					
Vell Label (ou	tside)	Acceptable	Not Acceptable	Explain:					
Vell Label (ins	side)	Acceptable	Not Acceptable	Explain:					
I-Plug		Acceptable	Not Acceptable	Explain:					
				PURGE METH	IOD				
otal Well Deb	3/20 th (ft)	Time: 10 = 10,25	06	Method:	low-flow				
epth to Water	(ft):	= 4.10							
Vater Column	(ft) :	= 675		1.1					
comments:				1 volume					
-				OBSERVATIO	NS				
dor:	None , L	.ow , High	, H₂S , Fuel	Like , Other:		X			
omments:									
			FI	ELD PARAME	TERS				
me	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
loll	0.5	400	+/- 0.1 s,u, 8DB	1.40	162. 4	0,401	1291	5.54	11. 12.1
016	0.514	_	7.97	0.66	3%		12.63		4.14
1021	1.5	400	7.91	A 51 4	161.4	0.378			4.14
1026	0,30		·	0.66	154.4	0.368	12,91	5.60	
1031	25	400	7.89		148.7	0.366	1291	5,89	4.14
	0.530		7.89	0.47	146.0	0.366	12.39		4.14
036	8.5	-	7.88	0.34	140.2	0.364		5, 55	414
046	9.3	400	7.88	0.34	139.8	0.364	1289		4.14
240	مايه ديلا	400	7.88	0.33	137.3	0364	12.85	5.35	4,14
				SAMPLING		<u> </u>			
te: 6/3/2	20			Time: {050)			_	
mple ID: DW	nc-m	W-619:		Method of Sam		grab			
alytical Param					23				
C. Sample Typ		MS/MSD	Duplicate (Ouplicate Samp	le ID:				
C. Parameters:	:								
sh picked up?	7		Vell locked? Y						
NED/SAMPLI	ER:		19			Vi.			



Monitoring Well										
			Field	Data Sheet - C	MC Groundwater					
Well Number.	MWGZ			Schard	1	Purpose of Sampl	•	OMC Quarte	rly Sampling	
Site:	OMC		Field Conditions:	VELL CONDITION		sy, 79	<u></u>			
Well Pad		Acaptable	Not Acceptable	Explain						
Protective Ca	sing	Acceptable	Not Acceptable	Explain:						
Well Casing		Acceptable	Not Acceptable	Explain:						
Locking Cap		Acceptable	Not Acceptable		o local					
Well Label (outside) Acceptable Not acceptable Explain No Cabel										
Well Label (in	iside)	Acceptable	Not Acceptable	Explain:						
J-Plug		Acceptable	Not Acceptable	Explain:						
2-1-1	U2 52 3	Time: 3. C		PURGE METHO Method:	low-flow					
Total Well De	112022	= 10,99	,0							
Depth to War		= 4.54								
Water Colum		= 6.45	•	1.0						
	III (14).	Ø = (5		1 volume						
Comments:										
				OBSERVATION	IS					
Odor:	None, L	ow , High	, H₂S , Fuel	Like , Other:						
Comments:	<u> </u>									
	Clear									
			FI	ELD PARAMET		Specific	Temp	Turbidity	Depth to water	
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)	
			+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	15.69	<10 NTU	4.39	
13:07		1.580	7.00	1,1+	-89,7	1.01+	 		4.09	
13:12		260	6.139	0,100	-85.0	1,135	15.43	5.5	11 00	
13:17	<u> </u>	7500	6.89	0.52	793.5	1.140	13.37	11+	7.01	
13127		Theo	6,90	0 48	-81.3	1,141	15.36		4.89	
13:25	7	260	6,90	0,46	-77.9	1.141	15.43		4,89	
13/30	2 1	260	6,90	0.43	-75.9	1141	15.40	1.2	4.89	
13:35		Sami	1			<u> </u>				
1 0 0 C						. <u></u>	<u> </u>			
	+			 						
			<u> </u>					83		
	_		 					\top		
			 	 	 	 	+	+-		
			<u></u> _							
				SAMPLING						
	412020			Time: 13						
Sample ID:	OMC-M	W-620	SC		nple Collection.	grab				
Analytical F	Parameters:	netals	vocs, W	NA						
	le Type: N/F		Duplicate	Duplicate San	nple ID:					
Q.C. Paran	neters: Vil	A								
Trash picke		-D	Well locked?	7						
SIGNED/S	AMPLER:	700	1. 60/	bys						
		<u> </u>	()	00						

				<u>Monitor</u>						
			Field	Data Sheet - C	MC Groundwater S	Site				
Well Number.	MW-67	· - • · ·		Galan	•	urpose of Sampling	g: C	MC Quarte	rly Sampling	
	омс	F			vercast					
			W	ELL CONDITIO	<u> </u>					
Well Pad	(Acceptable	Not Acceptable	Explain:						
Protective Casin	ng (Aceoptable	Not Acceptable	Explain:						
Well Casing	7	Acceptable	Not Acceptable	Explain:						
Locking Cap	Ç	ATT BUILDING	Not Acceptable	Explain:						
Well Label (outs	side)	Acceptable	Not Acceptable	Explain:						
Well Label (insid	de)	receptable	Not Acceptable	Explain:						
J-Plug		Acceptable	Not Acceptable	Explain: PURGE METHO	1D *****	N				
Duly (1/1	120	Time: / 2			low-flow					
Date: 6/4 Total Well Dept	100	= 30.6								
Depth to Water		= 4.38	•							
Water Column		-26-69		4.3						
Water Column	(14)	46.6		1 volume						
Comments										
				OBSERVATION	NS					
Odor:	None , Lo	w , High	, H₂S , Fuel	Like Other:						
Comments								1	112 6 1	1. 6
001111111111111111111111111111111111111	Black	& Par	houlate	'J (W 5	Tat of	Purge	Durg	direc	fly into	BUCK
			F	IELD PARAMET	ERS	Specific /			Depth to water	01
Time	Volume	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Conductance (mS/cmc)	Temp (°C)		(feet)	
	(gal)		+/- 0.1 s,u,	+/- 10%	+/- 10 mV /	+/- 3%	+/- 3%	<10 NTU		
1245	Stra	PLT PC	1260		ļ		1, 20	0	ST C 2	
1250		300	6.93	1.95	-118.5	2.837	16.08		5.62	
1255		300	6.90	0.98	-174 2	3 016	15.07	15.7	562	
	 	300	6.90	0.71	-123.1	2986	14.76	11-7	562	
1300	+		C 500	069		3.063	1466	10.7	5.62	
1305		300		0.62		2.916	14.85	9.9	5.64	
13/0	 	300	6-39		T	2.997	15PZ	2. 0	6.64	
1315	 	300	6.89	057	-120.8			86	5.65	
1320		300	6.90	0.55	-120.0	2.984	15.00	0,1	1-5-0-5	
1325	1 Se	James	E		 	<u> </u>	<u> </u>	 	 -	
**			_				ļ	 	 	
	1						<u> </u>		<u> </u>	
	+	 						<u> </u>	<u> </u>	
				SAMPLING						
- 1					325				_	
Date: 6			0	_	ample Collection:	grab				
		1W-620		Method of oc	inpio concentration					
		lecs WI								
Q.C. Sample	Type: NA	MS/MSD	Duplicate	Duplicate Sa	mple ID: N 4					
Q.C. Parame	eters: NA			N.						-
Trash picked	_ 		Well locked?	γ = -						
SIGNED/SAI	MPLER:	_ \ \	24							-
			7							

					ing Well				
			Field	Data Sheet - 0	OMC Groundwater				
Well Number	mw-62	215	Field Crew: W	Kitc		Purpose of Sampli	ng	OMC Quart	erly Sampling
Site:	OMC	- 7	Field Conditions:	SUMM TELL CONFITIC	70s Fi CA	Jn			
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Casir	ng (Acceptable	Not Acceptable	Explain:					
Well Casing		cceptable	Not Acceptable	Explain:					
Locking Cap		cceptable	Not Acceptable	Explain					
Well Label (outs	side)	Acceptable	Not Acceptable	Exptain:					
Well Label (insi	de)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain					
			I.e.	PURGE METHO					
Date: 6/4		Time: \\3	-	Method:	low-flow				
Total Well Dept		= 10.3°	1						
Depth to Water		= 4/84		. ^					
Water Column	(ft):	= 6,05		1.0					
Comments:				1 volume					
				OBSERVATION	<u></u>				
Odor:	None Lo	w High		Like , Other:					
Comments:									
Comments									
			FI	ELD PARAMET	ERS	In it			
Time	Volume	Rate	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
,,,,,	(gal)	(mL/min)	+/- 0.1 s,u,	+/- 10 <u>%</u>	+/- 10 mV	(mS/cmc) +/- 3%	+/- 3%	<10 NTU	
1139	0,5	400	6.70	0.63	-88.6	1.294	12,47	154.3	6.60
1144	1.0	400	66	175PC	-88.0	1.251	12,28	15.2	6.56
1149	1.5	400	6.64	0.58	-91.1	1.247	12.19	30,9	6.56
1154	2.0	400	6.66	0.58	-103.2	1.239	12.12	201.0	6.56
			1	0.31	-103.8	1,234		16.8	6.51
1159	2.5	400	6.69			1.230	1222	1	
1204	3.0	400	6.69	0.37	- 1035		1291	2.8	52
1209	3.5	9 00	6.70	0.37	-104.1	1,228		4.7	6.51
124		200	6.75	0.34	- 114.3	1.195	12.85	_	5,62
1219	4.5	200	6,77	0.34	-113.2	1.159	12,8	T .	5.62
1224	4,25	200	678	0,33	-1106	1.209	12.84	1.7	562
						<u> </u>		<u> </u>	
								<u> </u>	
				SAMPLING					
Date: ///	112			Time: 123					
Date: 6/4	1 60			• -	mple Collection	grab			
Sample ID: Analytical Para	UMC-1	nw-	5215		0.00				
			tressie i	Notel >	ania iD: — 64 d	Acces (12)	5-12	2.7	7 C
Q.C. Sample 1		MS/MSD	Duplicate	Duplicate San	ilhie in: OMC~	MW-621	3 10 6	りし	5-2
Q.C. Paramete		O SA							
Trash picked s	nbs /		Well locked?	1					
SIGNED/SAM	PLER:	_\(\bullet\)_		<u> </u>		<u>.</u>	<u>_</u>		
		-		1					
				1					

					ing weii	Pito			
					OMC Groundwater	Site Purpose of Sampling	10 (MC Quarte	erly Sampling
Well Number:	MW - 6	_		2. Kite		101	שי	PITTE MEMBER	,
Site:	ОМС		Field Conditions	WELL CONDITION	SUNNY, D	wmig			
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Casi	ing	Acceptable	Not Acceptable	Explain:					
Well Casing	5	Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (out	side)	Acceptable	Not Acceptable	Explain:					
Well Label (ins	ide)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:					
Detai		Time:		PURGE METHO Method:	low-flow				
Date: Total Well Dep		Time: 124	7						
Depth to Water		- = 4,53							
Water Column	• •	=							
Comments:				1 volume					
Continents:									
				OBSERVATIO	NS				
Odor:	(None Lo	w , High	, H₂S , Fu	el Like , Other:					
Comments:									
				EIEI D BARANE	TERS				
	Mak	Pate		FIELD PARAME	ORP	Specific	Temp	Turbidity	Depth to water
Time	Volume (gal)	Rate (mL/min)	pH (s.u	(mg/L)	(mV)	Conductance (mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
10.00	0.25	7.00	+/- 0.1 s,u,	0,33	+/- 10 mV	3,442	12.14		6.62
1252	0.25	200	6.41	0.54	-72.5	3957	12.20		3,20
1257	0.75	4	6.41	1747	/>	4,008	12.69	50.3	
1302	1 `	100	(.37	0.42	- 217	4,042	12.90	301	748
1307	-0.87	100	6.32	0.37	-3+.		l	29.4	7.50
1312		100	6.32	036	-88.6	4,041	13,03		
1317	1.12	100	6.32			4.041			
1322	1.25	100	6.31	0.34	- 88.4	4.047	13.04	7.50	7.56
1327	1.37	100	6.31	0.34	-38.1	4.044		12.4	7.57
1332		100	6.30	0.33	- 89.4	4.043	13,03		7.59
1337	7.0	_	6,30	0.33	70,7	4.042	13.05	12.5	7.60
	1						<u> </u>		
		1							<u></u>
				SAMPLING					
Date: / /	11-	 -		Time: 13					
Date: 6/4					ample Collection:	grab 2	»H = 3		
		nw-67				+			
Analytical Pa			metal B		mole ID				
Q.C. Sample	туре:	MS/MSD	Duplicate	Duplicate Sa	mpie io				
Q.C. Parame			Adda to a comment						
Trash picked	f	•	Well locked?	7					
SIGNED/SAI	MPLER:			<u> </u>					

				MOUITO	rıng well				
					OMC Groundwate	r Site			
Well Number:	WM- P	735	Field Crew:	1att 6.		Purpose of Samp	oling:	OMC Qua	rterly Sampling
Site:	OMC		Field Conditions:		200E				
Well Pad		Acceptable	Not Acceptable	WELL CONDIT Explain:	ION				
		9	S						
Protective Cas	iing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:	NT /0				
Locking Cap		Acceptable	Not Acceptable	Explain:		L			
Well Label (ou	•	Acceptable	Not Acceptable		Not present				
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain: PURGE METH	OD.				
Date: 🐧 💪	104/20	Time:		Method:	low-flow				
Total Well Dep		= 10.6	5						
Depth to Water	r (ft):	= 3.20						8	
Water Column	(ft):	= 7:45		11.9					
Comments:				1 volume					
Comments:									
				OBSERVATIO	NS				
Odor:	None), L	ow High	H₂S Fuel	Like Other		-			
Comments:									
			FI	ELD PARAME	TERS	la s		Y	
Time	Volume (gal)	Rate (mL/min)	pH (s.u.) +/- 0.1 s,u,	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%	Turbidity (NTU) <10 NTU	Depth to water (feet)
0878	0(320	6.93	3.19	-98,1	0.533	17.24	38.4	3.30
0833	6.5	320	6 93	1.42	-112	6511	16.17	1.8	3.30
	6.9	320	6.91	1,11	-118.8	6.514	16.14	0.0	3.30
6838	1.3	370	7:04		-127.4		1	00	3.30
0949	1.2	, , , , , , , , , , , , , , , , , , ,	-	6 94	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	0.55	16.74		
6848	1. 1	320	7.19	0.81	-(39	6.517	16.72		3.30
6853	20	320	7-23	6.75	-141.8	0.515	16.62	0.0	3.30
0859	2.4	320	7.28	0.69	-145.4	0.516	16.73	0.0	3.38
			=						
			···						
						<u> </u>			
		<u> </u>	<u> </u>	<u></u>			<u> </u>	<u> </u>	L
				SAMPLING	~ <i>f</i>				
Date: 66 (04/20			Time: 09	ひり				
Sample ID:					ple Collection:	grab			
Analytical Para	meters:	SOC, MAS,	4, 034 H	ctals,	PCBS				
Q.C. Sample T		MS/MSD	Duplicate	Duplicate Sam					
Q.C. Paramete	rs:								
Trash picked up			Well locked?	4 1	/				
SIGNED/SAMF	-		Met	1///					
	200		10000	DAMA/ C					

					ring Well				
	1M. £21	20			OMC Groundwate	(8)	line:	OMC Oue	stady Sampling
Well Number:		51)	Field Crew: M	all G	QT OF	Purpose of Samp	iing:	OMC Qua	rterly Sampling
Site:	OMC		Field Conditions:	Sunny, WELL CONDIT	ION				
Well Pad	_	Acceptable	Not Acceptable	Explain:	<u>.</u>	•		•	
Protective Cas	ing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:	- 48				
Locking Cap		Acceptable	Not Acceptable	Explain:	J/A				
Well Label (ou	tside)	Acceptable	Not Acceptable	Explain 1	Joh present	-			
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain: PURGE METH	OD.				
Date: 06/	03/20	Time: { 나 (Method:	low-flow				
Total Well Dep		= 34.1	*						
Depth to Wate	r (ft):	= 3.35	~						
Water Column	(ft):	= 30-8	r	4.4					
Comments:				1 volume					
	7			OBSERVATIO	NS	<u> </u>			
Odor	(None)	ow , High	, H₂S , Fuel	Like , Other					
Comments:									
			FI	ELD PARAME	TERS				
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
14(4	0-(280	+/-0.1 s,u,	2.38	41-10 mV	6.653	15.14	10 NTU	4.43
1419	0.5	280	7.52	1.16	-95.9	0.677	14.37	1.6	4.70
	6.9	280	7.50	0.95	-115	0.682	14.02	0.0	4.75
1424	1.9	290	7.49	0.72	-1266	0-687	13.99	0.4	4 15
1429	2,0		7.48	6.64			14.82	 ,	4.75
1434	+	280	-		-128.3	6.686	13.97		4.75
1439	2,4	280	7.47	0.56	-136.5	0.688			4.75
1494	9,9	288	7:47	0.51	-1327	0-686	19.65		+
1449	3.3	200	7.40	6.47	-134.4	0.685	19.66	2.1	475
			<u>.</u>						<u> </u>
				<u> </u>	_			<u> </u>	
	<u> </u>				<u> </u>		<u> </u>		<u> </u>
					<u> </u>		<u> </u>		
				SAMPLING			*		
Date: 66/	03/20			Time: 145	5				
Sample ID:	SMC-N	1W-623D			nple Collection:	grab			
Analytical Para	ameters:	UR, MÑ	A, Das . 1	retals, f	KB5				
Q.C. Sample 1		MS/MSD	Duplicate	Duplicate San					
Q.C. Paramete									
Trash picked u			Well locked? Y	19 1	/				·
SIGNED/SAM	/	1	West of	Julas					
				1441	_	_			

Monitoring Well Field Data Sheet - OMC Groundwater Site Malt 6 Well Number: NW-6245 Field Crew: Purpose of Sampling: **OMC Quarterly Sampling** 82°F SE SUNCE E OMC Site: Field Conditions: Well Pad Acceptable Not Acceptable Explain: Protective Casing Acceptable Explain: Not Acceptable Well Casing Explain: Acceptable Not Acceptable **Locking Cap** Acceptable Not Acceptable Explain: N/A Explain: Not persent Well Label (outside) Acceptable Not Acceptable Well Label (inside) Acceptable Noi Acceptable J-Plug Acceptable Not Acceptable Explain: **PURGE METHOD** 06/04/20 Time: (\5(Date: Method: Law-Flour 10.88 Total Well Depth (ft) Depth to Water (ft): 5.20 Water Column (ft): 5.68 Comments: **OBSERVATIONS** Odor: None Low High , H₂S , Fuel Like , Other: Comments:

			FIE	ELD PARAMET	ERS	-			
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
	-20	••	+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	
1165	6.0	368	7.62	2.25	15.5	0.600	20.67	0.0	5.23
1200	6.4	300	7.38	1.27	63.1	6.491	17.72	0.0	5.23
1205	0.9	200	7.29	1.79	106.6	0.468	17.29	60	5.23
1210	1.4	300	7.23	1-73	136.7	0.964	16.89	0.0	5.23
145	1.8	300	7.26	1.68	156.5	0.457	16.26	6-0	5.23
1220	2.2	300	7.21	1.62	168-6	6.449	16.72	0.0	5.23
1225	2.5	300	7.22	1.54	175.8	6.459	16-61	0-0	5.23
1236	3.0	300	7.22	1.51	179.8	6.457	16 81	00	5.23

SAMPLING

06/04/20

Time: 1235

Sample ID: OMC_MW - 6245

Method of Sample Collection: (cab

Analytical Parameters: VIG MNA, Dizg. Metals, PCBS

Q.C. Sample Type:

MS/MSD Duplicate Duplicate Sample ID:

Q.C. Parameters:

Trash picked up? Yes SIGNED/SAMPLER:

Well locked?

				MOINT	ning wen				
					OMC Groundwat	er Site			
Well Number:	WM-	6240	Field Crew:	Matt G.	0.50	Purpose of Samp	oling:	OMC Qua	arterly Sampling
Site:	OMC		Field Conditions		, 85°F				
Well Pad		Acceptable	Not Acceptable	WELL CONDIT	ION				
	nina			Explain:					
Protective Ca	sing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:	5 (A				
Locking Cap		Acceptable	Not Acceptable	Explain: 1		١			
Well Label (or	•	Acceptable	Not Acceptable	Explain:	Not passen.	+			
Well Label (in	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:					_
Date: 06/	04/20	Time: 101		PURGE METH Method:	Cos-Ago				
Total Well De	_	= 36.			Cos Plan				
Depth to Wate		= 5.2							
Water Column		= 31-4		5-0					
				1 volume					
Comments:				, , , , , , , , , , , , , , , , , , , ,					
				OBSERVATIO	Ne				
Odor: /	None L	ow , High	. H ₂ S . Fuel	Like , Other:	N3				
Comments:		, ,							
		.	FI	ELD PARAMET	ERS				
Time	Volume	Rate	pH (s.u.)	DO	ORP	Specific Conductance	Temp	Turbidity	Depth to water
	(gal)	(mL/min)	+/- 0.1 s,u,	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	(°C)	(NTU)	(feet)
1027	1.0	290	7.50	2-36	60-4	1.915	18-80	<10 NTU	5.80
1627	6.4	280	7.42	1.39	71.3	7.934	16.26	0.0	5-80
	08	280	7.37	1.05	88.7	 ' 	15.89		
1637	 			` .		1.927	· · · · ·	0.0	5.75
1037	1.1	280	7.34	0.89	104.7	1.925	15.26		5.75
1042	1.4	280	7.30	0.80	122.1	1.922	1498		5.75
1047	1.7	280	7.30	0.68	46.3	2.086	15.29	0.0	5.75 5.75
1097	2.0	285	7.34	0.58	-81-4	2.242			5.75
1057	2.4	280	7.36	6.53	-93.0	2.286			
1162	2.8	290	7.36	0.52		2.305			575
	1 - 0	200	7.50	0.00			17.00	0.0	7.70
					<u> </u>				
T									
				<u> </u>					<u> </u>
				SAMPLING					
Date: 66	104 (2)		Time: 1110	>				
Sample ID:	MC - MG	1-6240		Method of Sam	ple Collection:	rab			
Analytical Para	•				-	, , 00			
	•		, 035. M	•	,				
Q.C. Sample T		MS/MSD	Duplicate	Duplicate Sam	μ ια IU:				
Q.C. Paramete									
Trash picked u	(*7		Well locked?	419					
SIGNED/SAMF	LER:		What	Holel1	7		<u> </u>		
			,	/					

			Fiel		ring Well	er Site			
Well Number:	mw-	625 S	Field Crew: W		Onio Oromovan	Purpose of Samp	olina:	OMC Qua	urterly Sampling
Site:	OMC			-	my, breeze		•		, , , ,
				WELL CONDIT		}			779
Well Pad		Acceptable	Not Acceptable	Explain:	under was				
Protective Cas	sing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:	No lock				11
Well Label (ou	tside)	Acceptable	Not Acceptable	Explain:	NOH FOUND				
Well Label (ins	ide)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:	OD.				
Date: 6/2/2	0	Time: 135		PURGE METH Method:	low-flow				
Total Well Dep		= 11.66	, ,						
Depth to Water	r (ft):	= 2,79							
Water Column	(ft):	= 8.87		1.4					
Comments				1 volume					
				OBSERVATIO	NS				
Odor: (None , L	ow , High	, H₂S , Fuell	Like , Other:					
Comments:									
	Makuma	Data	FII	ELD PARAME		Specific	Temp	Turkidik.	Double to worker
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	(mg/L)	ORP (mV)	Conductance (mS/cmc)	(°C)	Turbidity (NTU)	Depth to water (feet)
1250		1100	+/- 0.1 s,u, 8,03	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	2.25
1358	0.5	400	_	1,10	-13.5	0.367	13.97		2.83
1403	1.0	400	7.97	0.42	-779	0.348	13,77	0	Z.83
1400	1,5	400	7.95	0.36	-88.3	0.346	13.81	D	2.83
1413	2.0	400	7.94	0,33	-105.5	0.343	13.62	0	283
14/8	25	400	7.94	0.31	-106,6	0,343	13.70	0	2.83
1423	3.0	400	7.92	0.29	-97,9	0.341	13.76	0	2.83
		1							
					<u> </u>	<u> </u>		l	
Date: 1 1	10			SAMPLING	2				
Date: 6/2					30				
		mw-62			nple Collection:	grab			
Analytical Para	meters:	ocs, Me	tuls, MI	NA					
Q.C. Sample T	ype:	MS/MSD	Duplicate	Duplicate Sam	ple ID:				
Q.C.: Paramete	rs:		60						
rash picked up	P/A SO		Well locked?	المالات المالات	-				
SIGNED/SAMP	PLER:	WE	~~						

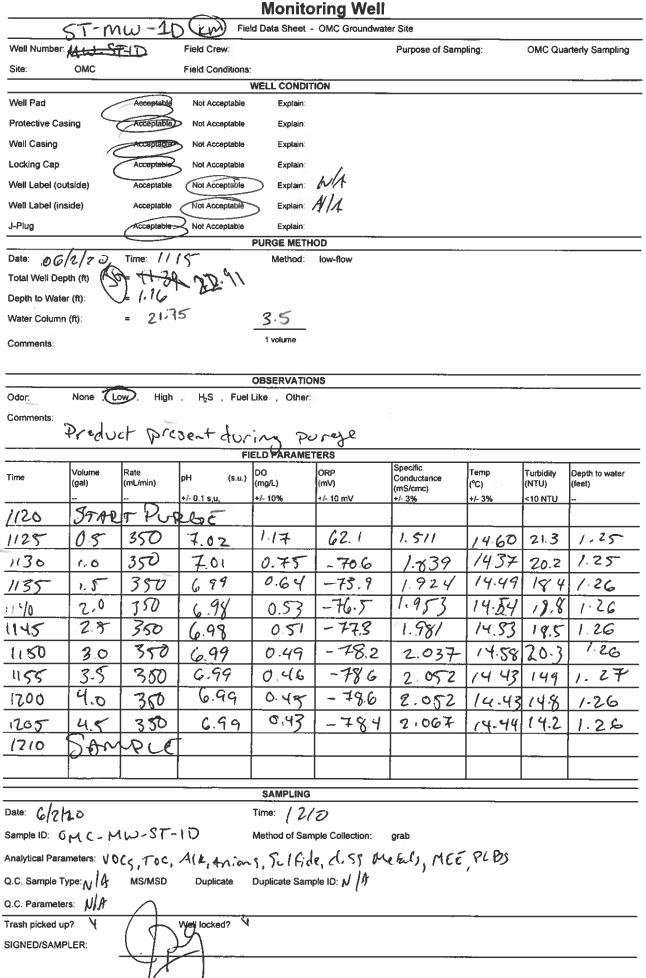
				Monito	oring Well				
					- OMC Groundwat	er Site			
Well Number:	1 MW -	625D	Field Crew: W	1. Kite		Purpose of Sam	ıpling:	OMC Qu	arterly Sampling
Site:	OMC	<u> </u>	Field Conditions	: 90sF,	sonny, bre	ery			
				WELL CONDIT	TION V	<u> </u>			
Well Pad		Acceptable	Not Acceptable		under water				
Protective Cas	sing	Acceptable	Not Acceptable	Explain;					
Well Casing		Acceptable	Not Acceptable	Explain:	122 15 1A				
Locking Cap	•	Asceptable	Not Acceptable	Explain:	not forme	L.			
Well Label (ou	itside)	Acceptable	Not Acceptable	Explain:	not tome	Į.			
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable '	Not Acceptable	Explain:					
Date: 6/2/	070	Time: 126	<u> </u>	PURGE METH Method:	IOD low-flow		139		
Total Well Der		Time: 20		Welling.	IOM-IIOM				
Depth to Wate		= 3.37	,						
Water Column	* -	= 71/7	4	4.3					
	(19.	- 000	•	1 volume					
Comments:				i volune					
 ,									
Odor:	None L	ow , High	C II C S Final	Like , Other:	<u> </u>				
			FI	ELD PARAME	TERS	 -			·-,-
ime	Volume	Rate	ρH (s.u.)	DO	ORP	Specific Conductance	Temp	Turbidity	Depth to water
	(gal)	(mL/min)	+/- 0.1 s,u,	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
1244	0.5	400	7.41	0.51	-67.3	1.971	12.51	0	3.70
1251	1.0	460	7,44	0.45	-64.7	1.970	12.46	0	3.80
1256	1.5	400	7.45	0,40	-61.9	1.981	12.50	0	7
					î i	100	+ -		3,80
1301		400	7,57	0.38	-73,9	2.431	12.49		3.80
1304	25	400	<i>৪.</i> 4১	0.30	-123.8	2.339	12.43	0	3.80
1311	3.0	400	8.54	0.28	-101.2	2.860	12.41	0	3.80
1316	3.5	400	8.57	0,27	-36.7	2.873	12,43	0	3.80
1321	4.0	400	8.59	0.24	-816	2881	12.43	0	3.82
1326	4.5	400	8.55	0.26	-80.4	2.871	1237		3.87
			10				1		7.7.7
							-		
 -		 -							
	<u> </u>	<u> </u>	<u></u>	<u> </u>	l		ļ		
,				SAMPLING		98			
Pate: 6/2/				Time: 1330	•				
ample ID: O	Mc-m	W-62	s D	Method of Sam	ple Collection:	grab			
				MNA					
.C. Sample Ty		MS/MSD	Duplicate	Duplicate Sam	ple ID:				
.C. Parameter			•						
rash picked up			Well locked?	n lar					
GNED/SAMP	•	12	D	J IWE					
CHED/SKIVIP	CEIV	W-							

Field Data Sheet - OMC Groundwater Site Purpose of Sampling: **OMC Quarterly Sampling** Field Crew: L. Schauch Well Number: MW6265 Field Conditions: Party away 83°F Site: WELL CONDITION Explain: Well Pad Explain: Not Acceptable Protective Casing Well Casing Not Acceptable Explain no lock Locking Cap outside label Explain: NO Not acceptable Well Label (outside) Acceptable Acceptable Not Acceptable Explain: Well Label (inside) Acceptable Not Acceptable Explain J-Plug PURGE METHOD Method: Date: 6/3/2020 Time: Total Well Depth (ft) 15:25 Depth to Water (ft): =5:50 = 70 Water Column (ft): Comments: **OBSERVATIONS** High , H2S , Fuel Like , Other: Odor: Comments: brown purge water FIELD PARAMETERS Specific Turbidity Depth to water Ю ORP Temp Rate Volume Conductance (s.u.) (NTU) Time (°C) (mg/L) (mV) (mL/min) (gal) (mS/cmc) <10 NTU +/- 39 +/- 10% 5,48 1,333 310 80، ي 15:30 0.72 13.37 1.260 0,0 15:35 200 6.20 80,9 5,46 0.17 1,240 13113 6.12 2.98 .213 5,94 7600 13,00 0.10 13.14 86.3 0.08 5155 3.20 -87,9 0,07 16:00 *8*0.3 0.07 1,170 3,23 16:05 1.158 3.22 95,4 0.06 0:10 5.46 13.32 0,0 1,161 5.36 O: Ola 16:15 0.04 240 5, 28 16:20 5.46 1,145 0.05 110:25 240 SAMPLING Date: 0/3/2020 Time: 16:40 Method of Sample Collection: Sample ID: OMC-MW- (0765 Analytical Parameters: Metals, VDCs MNA Duplicate Duplicate Sample ID: Q.C. Sample Type: N/A MS/MSD Q.C. Parameters: N/A Trash picked up? SIGNED/SAMPLER:

			Field	Data Sheet -	OMC Groundwater	r Site	_		
Well Number:	Aulian	<u> </u>	Field Crew:	Scharc	<u></u>	Purpose of Sampli	ing:	OMC Quar	terly Sampling
	OMC				Cloudy 18	33°F			
				VELL CONDITI					
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Casir	ng	Acceptable	Not Acceptable	Explain:	<00	Pg. 1			
Well Casing		Acceptable	Not Acceptable	Explain:	500	FJ - 1			
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (outs	side)	Acceptable	Not Acceptable	Explain:					
Well Label (insid	de)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:					
				PURGE METHO	OD				
Date:		Time:		Method:	low-flow				
Total Well Depti	h (ft)	=					A		
Depth to Water	(ft):	=				See p	g. I		
Water Column ((ft):	=				·	•		
Comments:				1 volume					
				OBSERVATIO	NS				<u> </u>
Odor:	Mone, Lo	ow . High	, H₂S , Fuel	Like , Other:		Sel D	a. 1		
Comments:	* 10	HG YOK	test @	10:300	and it re	ser p	3,		
				51 D DAD AME	TEDÊ				
	hard in a	Rate	-	ELD PARAMET	ORP	Specific	Temp	Turbidity	Depth to wate
Time	Volume (gal)	(mL/min)	pH (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)
1 C100		2110	+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	1 7 7	<10 NTU_	5,41
Ho 30		240	5.06	0.05	-19.4	1,132	13.3	$\overline{}$	<u> </u>
16:35		240	4.98	0.03	777.7	1,137	13.24	010	5.40
16:36									
110:40	$ \Psi \leq$	AMPLE	D						ļ <u>.</u>
, <u>, , , , , , , , , , , , , , , , , , </u>	10.0					_			<u>L</u>
	010	 							1
		-	 	-		<u> </u>		1	
	 	 		 			\vdash	1	
	 	 		-			 	+	
		<u> </u>		-			 		
	<u> </u>	<u> </u>						 -	<u> </u>
· · · · · · · · · · · · · · · · · · ·									
									<u> </u>
				SAMPLING					
Date:				Time:	-				
				Method of Sa	mple Collection:	grab			
Sample ID:							See F	5.1	
Analytical Para	meters:							-	
Q.C. Sample T	уре:	MS/MSD	Duplicate	Duplicate Sar	mple ID:				
Q.C. Paramete	ers:							.	
		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 							
Trash picked u	ip?	Y	Well locked?	Y 4					

		_		Monitor	ing Well_				
					MC Groundwater	Site	1		
Well Number: N	M(026.	F	ield Crew: L S	charch		Purpose of Samplin	g: / (OMC Quarte	erly Sampling
	DMC	F	ield Conditions:			, 82°F	W		
				ELL CONDITIO	ON				
Well Pad		Appendable	Not Acceptable	Explain:					
Protective Casing	g	Acceptable	Not Acceptable	Explain:					
Well Casing		cceptable	Not Acceptable	Explain:	180				
Locking Cap		Acceptable	Not Acceptable		10 labe				
Well Label (outsi	ide)	Acceptable	Not Acceptable		10 (04)	= 9			
Well Label (insid	le)	Adceptable	Not Acceptable	Explain:					
J-Plug		A Ceptatile	Not Acceptable	Explain:	<u></u>				
Date: 0/4/20	570	Time: 11:2			low-flow				
Total Well Depth		= 19.25							
Depth to Water		= 5.67							
Water Column (i		= 23.58	-	3.8					
				1 valume					
Comments:									
				OBSERVATION	is				
Odor:	None , Zo								
Comments: w	105+14	clear	, brownt	DOOR	water				
11	103119	0,000	101000.	porge	Water -				
			FIE	LD PARAMET		Specific	Temp	Turbidity	Depth to water
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	(mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)
		<u> </u>	+/- 0.1 s.u.	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	
11:30		320	4.93	2.72	7134.1	3.275	13.52		6,23
11:35	1/	320	7.95	1.37	-150.6	3.217	<i>13,</i> 23	8.7	6,51
11:40		320	7.83	0.74	-150.5	2.729	12.90	1012	6.51
11:45	77.3	320	7.80	0.63	-147,7	2.609	12.71	2.2	6.51
11:50		370	7.83	0.58	-141.3	2.561	1269	1.2	6.51
	 		7.83	0.54	-153.2	2.540	12.55	0.8	6.51
11155	10	320	7.84	0.52	-156,3	2.5 24	1		
12:00	₩	370				2.516	12.59	13	4.51
12:05	 	320	7.84	0,47	-143 1		12.61		6.51
12:10	11	320	7.84	0.45	-146.0	2.506			Т —
12:15	W	320	7.34	0.45	-14515	2.505	1240	11/7	6.51
12:20	50	Same	VGO_		<u> </u>	<u> </u>	<u> </u>		
<u>, </u>							<u> </u>	<u> </u>	
				SAMPLING					
Date: 0/4	12020			Time: /2:	20				
•				Method of Sa	mple Collection	grab			
		W-67							
			tals, Mr		mole ID:				
Q.C. Sample 1			Duplicate	Duplicate Sar	ripie iu.				
Q.C. Paramete	ers: NIA								
Trash picked u	,	().	Well locked?						
SIGNED/SAM	PLER: ((MOV)		ron	<u> </u>				
		V 12 0							

				Monito	ring Well				
	STUM	U-15	Fie	ld Data Sheet -	OMC Groundwat	er Site			
Well Number:	-MV-5	THE STATE OF THE S	Field Crew: 7	-		Purpose of Sam	pling:	OMC Qua	arterly Sampling
Site:	ОМС	(P)	Field Conditions	WELL CONDIT	Sunny	Winds			
Well Pad		Acceptable	Not Acceptable	Explain:	ION				· · · · · · · · · · · · · · · · · · ·
Protective Ca	sing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (or	utside)	Acceptable	Not Acceptable	Explain:	NA				
Well Label (in	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:					
Date: 3/2	10.1	Time: 12	A ===	PURGE METH					
Total Well De	'	Time: $/3$		Method:	low-flow				
Depth to Wate		= 1.39	•						
Water Column	500	= 10,0	3	1.6					
Comments:				1 volume					
				OBSERVATIO	NS				
Odor:	None Lo	ow High	, H₂S Fuel	Like Other:					
Comments:									
			Ell	ELD PARAMET	EDC				
	Volume	Rate		DO	ORP	Specific	Temp	Turbidity	Depth to water
Time	(gal)	(mL/min)	pH (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)
1310	STAR	- P.	12 Gr E	+/= 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	=
1315	0.4	300	7.03	1.18	172	0.697	15.65	11.6	1.59
1320	0.9	300	G.90	0.40	-19.7	0.958	15.27	5.0	1.59
1325	1.2	300	6.91	0.68	-41.0	1.028	15.22	 	1.55
1330	1.6	300	6.92	0.70	-56.4	1.071	15.35		540
1375	7.0	300	0.93	066				-	
1340	2.4	300	6-93	ľ	-62.5	1.018	15-47		1.60
1345	2.8	300		0.60	-65.Z	 	15-19	09	1.60
1350	' '	<i>3</i> 6ა	6.94	0.51	- C8.0	1:134	15-10	1-0	-
1355	3,2		- ' ' '		90.0	1./46	1)-66	1~0	1.60
12))	SAMA	L G							
						<u> </u>			
						<u> </u>			
2. [1.])	<u>(36)</u>		SAMPLING	70.0				
Date: 6/2/			\$66	Method of Sam	55				
Sample ID: 0	MC-MI	N-87-	リメ	Method of Sam	ple Collection:	grab	. M.A	r.As	
						, PCB, D			
Q.C. Sample T	1170	MS/MSD				-MW-ST	-1)=R	10/0	50
Q.C. Paramete			ARENT		000	-ST-Mh	<u> </u>		
Trash picked up		()	Well/ocked?						
SIGNED/SAMP	LER	19			_				
		\sim							



				Monito	ring Wel	I			
51	<u></u>		Fiel	d Data Sheet -	OMC Groundw	ater Site	•		
Well Number:		25	Field Crew: J.	Gahan		Purpose of Sam	pling:	OMC Qua	arterly Sampling
Site:	OMC		Field Conditions:			windy			
			- 1	WELL CONDIT	ION				
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	sing	Acceptable	Not Acceptable	Explain:					
Well Casing	,	Acceptable	Not Acceptable	Explain:					
Locking Cap		Acesprable	Not Acceptable	Explain:	4				
Well Label (ou	tside)	Acceptable	Not Acceptable	Explain: ,	1/2				
Well Label (ins	ide)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable) Not Acceptable	Explain:					
				PURGE METH	OD				
Date: 6/2	120	Time: /45	3	Method:					
Total Well Dep		= 10.20	>						
Depth to Wate	r (ft):	= 1,00							
Water Column	(ft):	= 9.20		1.5					
Comments:				1 volume					
				OBSERVATION	vs				
Odor:	None , Lo	ow , High	, H₂S , Fuel	Like , Other:				-	
Comments:									
			FII	ELD PARAMET	ERS	·			
Time	Volume	Rate	pH (s.u.)	DO	ORP	Specific Conductance	Temp	Turbidity	Depth to water
	(gal)	(mL/min)	(8)	(mg/L)	(mV)	(mS/cmc)	(°C)	(NTU)	(feet)
1500	37AR	TPUR	+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	2-68
			6.92	0.95	(-X =-	0 - 1/4	(7.00	87-	1 4.0
1505	0 4	300	4.12	רוי.ט	-68.5	10747	13.75	875	1.05

			FII	ELD PARAMET	ERS				
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
	ļ		+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	
1500	87AR	TPUR	GE						2.48
1505	०ः५	300	6.92	0.95	-68.5	0744	13.75	875	1.05
1510	08	300	6-88	6.71	~74.1	0.751	13.55	23.7	1.05
1515	1.2	500	6-85	0-53	-734	0.738	13.63	106	1.05
1520	1.4	300	6.85	0.53	-76.3	6717	13.39	7.3	1.00
1725	2.0	300	8.87	0.52	- Sc.c	0711	13.32	6.5	1.06
1530	2.4	300	6.88	0.49	-89.1	0.694	13.40	4.5	1.07
1535	2.6	300	6.89	0.47	-87.1	6. x01	13.30	3,9	1.06
1540	SAM	PLE							
			·						
									_
							<u> </u>		

SAMPLING

Date: 4/2/2020

Time: 1540

Sample ID: OMC-ST-MW-25'

Method of Sample Collection: 9705

Analytical Parameters: VECS, FOC, D-35 McFa/S, MEE, St Inde, Alk, Anrows, PCBs

Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A

Trash picked up? N/A Well/locked?

SIGNED/SAMPLER:

Field Data Sheet - OMC Groundwater Site Field Crew: J. Anhum Well Number: 57-MW-25 Purpose of Sampling: **OMC Quarterly Sampling** Field Conditions: Overconst as F winds **WELL CONDITION** Well Pad Acceptable Not Acceptable Explain: **Protective Casing** Acceptable Not Acceptable Explain: Well Casing Acceptabil Not Acceptable Explain: Locking Cap Acceptany Not Acceptable Explain: N/+ Well Label (outside) Acceptable Not Acceptable Well Label (inside) Acceptable Not Acceptable Explain: J-Plug Acceptable Not Acceptable Explain **PURGE METHOD** Date: 6/3/20 Time:0 7 57 Method: low-flow = 22.18 Total Well Depth (ft) = 6.90 Depth to Water (ft): = 2128 Water Column (ft): Comments: **OBSERVATIONS** Odor: High , H2S , Fuel Like , Other: Comments:

			FI	ELD PARAME	TERS				·
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
			+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	
0800	Start	Purey	<u> </u>						
0805	0.5	350	6.56	15.3	-87.6	1.085	11.63	2229	1.05
0810	1.0	350	6.84	0.91	-107.7	1.103	11.37	239.4	1.05
0815	1.5	-550	692	072.	114.1	1.133	11.31	1176	1.05
1820	2-0	320	6.46	0.64	-1/8.1	1.139	11.28	928	1.05
825	2.5	350	6.99	0.59	-120 5	1-149	11.17	12.9	1.05
0830	3.0	350	4.01	0.58	- 123.0	1.153	11.25	70.6	1.05
0835	3.5	350	7.03	0.52	-125.6	1.150	11.38	46.3	1.05
0840	4.0	356	7.05	0,50	-127.5	1.184	11.28	35.9	1.05
0845	4.5	350	7.06	6.49	-128.9	1.165	11.25	500	1.00
0850	50	350	7.07	0.47	-130.6	1.165	11.18	15.5	1-05
0855	5.5	350	7.08	0.06	~131.2	1.163	11.25	16.1	1.05

Date: (1/3/10

SAMPLING

0905

Sample ID: OM C-ST-MW-ZD

Method of Sample Collection:

Analytical Parameters: VOC3, MNA, PCBS
Q.C. Sample Type: MS/MSD Duplicate

Duplicate Sample ID: SAME AS PARDIY

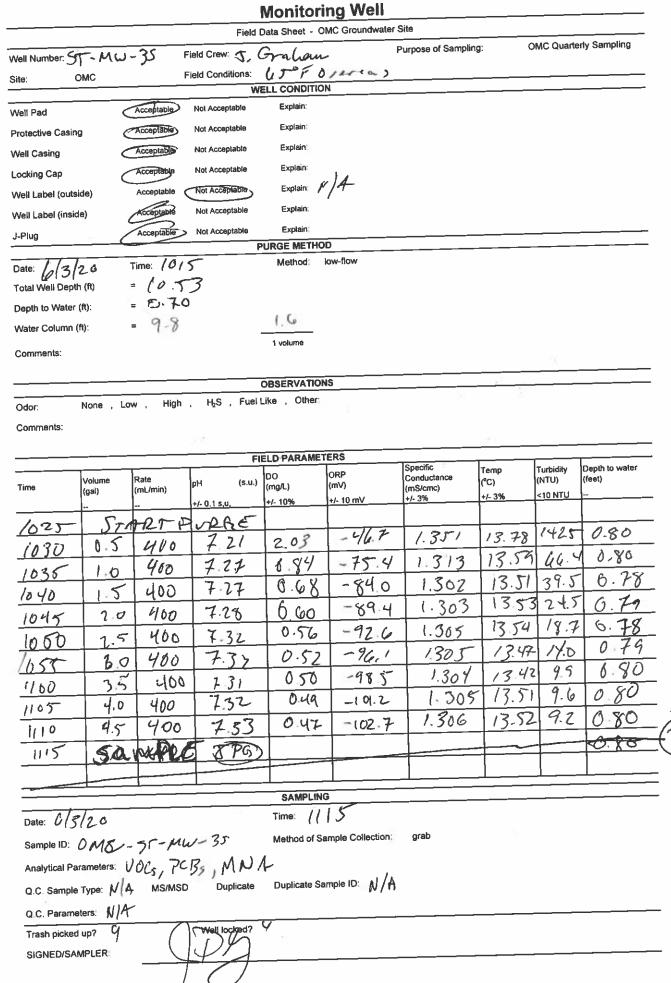
Q.C. Parameters: 5 Ame as PARENT

Trash picked up?

SIGNED/SAMPLER:

Well locked?

			Fie	ld Data Sheet	OMC Groundwate	er Site			7.
Well Number:	31-M1	V-2P) brahe		Purpose of Samp	pling:	OMC Qua	arterly Sampling
Site:	OMC		Field Conditions	400	Overcast	windy			
				WELL CONDIT					
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	sing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:	_				
Locking Cap		Acceptable	Not Acceptable	Explain;		de .	0.00	/	
Well Label (ou	tside)	Acceptable	Not Acceptable	Explain:		See	PJ	·	
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:	`		•		
J-Plug		Acceptable	Not Acceptable	Explain:	00				
Date:		Time:		PURGE METH Method:	low-flow				
Total Well Dep	oth (ft)	=							
Depth to Wate	r (ft):	=				\cap	1		
Water Column	(ft):	=				die s	og '		
Comments:				1 volume			0		
				OBSERVATIO	NS				
Odor:	None , Lo	w , High	, H₂S , Fuel	Like , Other:					
Comments:		Sue	PY	1					
				ELD PARAME	TERS				
Time	Volume (gal)	Rate (mL/min)	pH (s.u.) +/- 0.1 s,u,	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%	Turbidity (NTU)	Depth to water (feet)
0900	6.0	350	7.09	6.45	-132.1	1-165	11.23	<10 NTU	1.05
0705		mP/E	-					1 3	
<u> </u>									
	1							1	
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									ļ
								Ì	
						_			
	-								
				<u> </u>	l	<u> </u>	<u></u>	I	
Date:				SAMPLING Time:					
					rata Oalla M				
Sample ID:		11	091	Method of San	nple Collection:	grab			
Analytical Para		000	" V						
Q.C. Sample Ty	уре:	MS/MSD	Duplicate	Duplicate Sam	ple ID;				
Q.C. Parameter	rs:		<u> </u>						
Trash picked up	p?	(]	Well looked?						
SIGNED/SAMP	PLER:		1/						
]	/)						



				Monitori	ng Well MC Groundwater S				
	2.4.4.1	- 3h F	ield Crew: 5.			urpose of Sampling	g: 0	MC Quarte	rly Sampling
Well Number:		7-30 F			Dur cast	-			_
Site: C	MC	F		LL CONDITION					
Well Pad		Acceptable	Not Acceptable	Explain:					
erotective Casing	· 6	Acceptables	Not Acceptable	Explain:					
		Acceptation	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap	(a)	Acceptable (Not Acceptable	Explain: A	14				
Well Label (outsi		Acceptable.	Not Acceptable	Explain:	,				
Well Label (inside	-, (Acceptable	Not Acceptable	Explain:			<u> </u>		
J-Plug			Р	URGE METHO	Ď				
Date: C/3/2 Totál Well Depth) (ft)	Time: (153 = 18.7)		Method: I	ow-flow				
Depth to Water (=0 70		70					
Water Column (f	ft):	= 1803		2.9_					
Comments:				1 volume					
			11	DESERVATION	<u> </u>				
Odor	None , Lo	w , High ,	, H₂S , FuelL	ike , Other:		_ U	HCS.	f =~	1.0
Comments:	/	3 N.	cloudy	lat.	9000	131			
	Wate	/3	Cloudy	LD PARAMET)/ - 7 ERS				
		louis .		DO	ORP	Specific Conductance	Temp	Turbidity	Depth to water (feet)
Time	(gal)	(mL/min)	pH (s.u.)	(mg/L)	(mV)	(mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) < <u>10 NTU</u>	(1001)
 _	-		+/- 0.1 s,u,	+/- 10%	+/- 10 mV				
1200	STA	+	RGE	1717	-49.3	1.374	12.87	110.2	0.80
1205	0.5	400	1.25	 		1.334	12.82		0.80
1210	1.0	400	124	<u> </u>	-52.0	1.327	12.80	44.3	0.80
1215	1.5	400	7-23	0.73	-55.8		12.82		0.81
1220	20	400	7.21	80.0	-587	1.344	<u>`</u>	4 111/	
.115	2.5	400	7.20	0.63	- 62.3	1.352	12.85		
1230	3.0	406	7.23	0,61	-667	1.328	12.16		0.81
	3.5	400	7.21	0.59	-69.6	1-320	12.78	15.2	0.81
1235	4.0	400	7.20	0.57		1.316	12.75	10.8	0.82
1240	+	+	 	0.53	-76.1	1.283	1267	7.4	0.82
1245	4,5	400	7.21	0.50	-77.8	1.269	12.7	95	0-82
1250	50	400	721			1275	12,70	0.47	
1255	53	400	7.21	0.50	-800		1 12,50	<u> </u>	
				SAMPLING					
Date: G/3	120			Time: /30	00				
Sample ID: (OMC-S	T-MW	-30		imple Collection	grab			
Analytical Par	rameters: #	OCS. MA	JA, PCBs		•				
Q.C. Sample	Type: At A	MS/MSD	r Duplicate	Duplicate Sa	mple ID: N/V				
			-		•				
Q.C. Parame			Well/locked?	_					
Trash picked		1-	24	•					
SIGNED/SAM	MPLEK:	- (/ i	//- -						
		10							
		, (

				MOUNTO	ring weii				
					OMC Groundwate	er Site			
Well Number: 2	ST-HW	-4S	Field Crew:			Purpose of Samp	ling	OMC Quar	terly Sampling
Site:	ОМС				Sonny			_	
			_	Euploin	<u> </u>	·			
Well Pad	(Acceptable	Not Acceptable	Explain: Explain:					
Protective Casi	ng	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptation	Not Acceptable	Explain:					
Locking Cap	. 2.43	Coppe	Not Acceptable	* 401	114				
Well Label (out		Acceptable	Not Acceptable	Explain:	/ ["				
Well Label (insi	ide)	Acceptable	Not Acceptable	Explain:					
J-Plug 		Ассериаль		PURGE METHO	OD		<u> </u>		
Date: (a) 7	?0	Time 07-4	5	Method:	low-flow				
Total Well Dept	th (ft)	= (1.79							
Depth to Water	(ft):	= 263							
Water Column	(ft):	=9.10		<u>[\(\c)</u>					
Comments:		, - · •		1 volume					
				OBSERVATIO	NS				
Odor	None / Lo	w , High	, H₂S , Fuell	Like , Other:					
Comments:									
-			FI	ELD PARAMET	ERS				
	Volume	Rate	pH (s.u.)	DO	ORP	Specific Conductance	Тетр	Turbidity	Depth to water
Time	(gal)	(mL/min)	+/- 0 1 s,u,	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU_	(feet)
0745	300	RT-PU	REC						
0750	03	200	6.38	3.94	27.1	1.799	15.49	24.6	2.70
0757	 	200	695	0.95	_ 90.8	1.776	14.93	11.3	2.70
DF13	 		703	080	- 95.9	1727	14.84	5.7	2.71
0800	 	200				1.705	14.82	8.0	271
0405	-	200	7.08	0.68	-100.4			00	
0810		200	7.12	6.61	-126.3	1.482	14.80	-	2.70
0815	<u> </u>	200	7.13	0.56	~129.3	1.688	14.84	0.0	7.71
0820		260	7.12	0.54	-123.6	1.653	14.70	7.9	2.71
6875	13A	npie			ļ				
								<u> </u>	<u> </u>
	\vdash								
				SAMPLING					
Date: (g(\$ 12	20			Time: 0%				-	
-		~ MA 6.3	υ <		mple Collection:	grab			
Sample ID:					•	-			
			Bs, MMA	Duelless. O	nple ID: NA	-			
Q.C. Sample 1		MS/MSD	Duplicate	Duplicate San	ible in: 10 (
Q.C. Paramete		<u>-</u>	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				<u> </u>		
Trash picked u	(\bigcirc	Well Jocked?	1					
SIGNED/SAM	PLER:								
		シ	I = I						

Monitoring Well Field Data Sheet - OMC Groundwater Site **OMC Quarterly Sampling** Purpose of Sampling: Graha Field Crew: Well Number: ST-WW-4D Field Conditions: OMC Site: WELL CONDITION Explain: Acceptable Not Acceptable Well Pad Explain: Not Acceptable **Protective Casing** Not Acceptable Explain: Well Casing Explain: Not Acceptable Locking Cap Not Acceptable Explain: Well Label (outside) Explain: Not Acceptable Well Label (inside) Not Acceptable Explain. Acceptabl J-Plug PURGE METHOD Time: 1335 low-flow Method: Date: 4/3/20 Total Well Depth (ft) = 253 Depth to Water (ft): Water Column (ft): 1 volume Comments: OBSERVATIONS H2S , Fuel Like , Other: None , Low , High . Odor: Comments: FIELD PARAMETERS Specific Depth to water Turbidity Temp ORP DQ Volume Rate Conductance ρН (s.u.) (NTU) (feet) Time (mg/L) (°C) (mV) (mL/min) (mS/cmc) (gal) <10 NTU +/- 3% +/- 10 mV +/- 10% r/- 0.1 s,u 1340 retit STA 14.05 3270 3.73 -7.2 0.155 5.44 200 790 1345 3.65 0.175 1404 229.3 4.72 192 7.2 200 1475 3.58 13.93 -3.4 7-86 200 3.63 13.86 119.7 - 3.3 0.367 26 200 400 13.78 108.3 -3.10.397 2 94 200 1405 3.61 -3.4 6.487 13.82 810 200 X 73 1410 13-61 62-1 3.60 0-518 200 -4.0 7.69 46 145 13.77 45.1 3.60 5.3 0.612 2.25 766 200 1420 297 3.60 13.71 7.60 6.75 200 05 1425 27.6 3.60 13.80 1.91 0.808 7.55 200 1430 22.6 3.60 -7.4 13.76 0876 1.79 751 200 1435 SAMPLING Date: 6/3/20 Time: /5/5 Method of Sample Collection: Sample ID: DWC-St-MW-4D Analytical Parameters: VOCS, PCBS, MNA Duplicate Sample ID: WIL Duplicate Q.C. Sample Type: Well/locked? 11 Trash picked up? SIGNED/SAMPLER:

			Field	Data Sheet - O	MC Groundwater	Site			
Vell Number: <	50-M	w-401	Field Crew			Purpose of Samplin	g: C	OMC Quart	erly Sampling
	OWC	-	Field Conditions:						
			W	ELL CONDITIO	N				
Vell Pad		Acceptable	Not Acceptable	Explain					
rotective Casir	ng	Acceptable	Not Acceptable	Explain:					
Vell Casing		Acceptable	Not Acceptable	Exptain:			Pa	(1	
ocking Cap		Acceptable	Not Acceptable	Explain:			τ)	
Vell Label (out	side)	Acceptable	Not Acceptable	Explain:			C		
Vell Label (insi	de)	Acceptable	Not Acceptable	Explain					
-Plug		Acceptable	Not Acceptable	Explain:					
			1	PURGE METHO	D low-flow				
Date:		Time:		Method	IOM-IIOM				
Total Well Dept	th (ft)	=			1				
Depth to Water		==		Lec	27				
Vater Column	(ft):	=			, ()				
Comments				1 volume					
				OBSERVATION					
		High			15				
Odor	None , L	ow High	, nyo , ruei	5	. 1				
Comments				Jeck	3)				
			FI	ELD PARAMET	ERS				
	Volume	Rate		DO	ORP	Specific Conductance	Temp	Turbidity (NTU)	Depth to water (feet)
Tirne	(gal)	(mL/min)	pH (s.u.)	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	(°C) +/- 3%	<10 NTU	
1440		200	7-48	1.68	7.8	0.938	13.75	197	3.60
		+	7.45	1.62	-8-2	1.601	13.77	14.3	3.60
1445	-	100_	-	7.54	-9.8	1.051	13.76	14.9	3.60
1450	<u> </u>	200	7-43	1.49	-11.60	1.101	13-82	149	3.59
1455	<u> </u>	200	7.41		(2)	+	13.77		3.56
1500		200	7.40	1.41	-11-7	1.144		12.8	
1505		200	7.39	1.38	-12.0	1.168	13.82		3.56
1516		200	7.38	1.36	-12-1	1.176	13.74	12.6	356
1575	121	PIMPI	F						
/3//	10	1110				-			
	+	+	+						
		+	_	 	 	 			
			 	 	 	+	├──	 	+
						<u> </u>			
				SAMPLING	<u> </u>				
Date:		•		Time:					
Sample ID:		ke po	١ ١	Method of Sa	mple Collection:	grab			
Analytical Pa	rameters:	<i>γ</i>	-)						
		MS/MSD	Duplicate	Duplicate Sar	mple ID:				
Q.C. Sample		HOME	- 26						
Q.C. Parame			Well locked?						
Trash picked		_		0-1					
SIGNED/SA	MPLER:		Jec_	that					

			Ciold	Data Sheet - C	MC Groundwater	Site			
51				Gahan		Purpose of Samplir	ng: C	OMC Quarte	erly Sampling
Well Number:		,	Field Conditions:		-				
Site:	ОМС			ELL CONDITIO					
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Casir	na /	Acceptable	Not Acceptable	Explain:					
Well Casing	3	Acceptable	Not Acceptable	Explain:					
Locking Cap	_	Acceptable	Not Acceptable	Explain:					
Well Label (outs	side)	Acceptable	Not Acceptable	Explain:					
Well Label (insi	de)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:					
				PURGE METHO					
Date: C/4/		Time: /04	0	Method:	low-flow				
Total Well Dept	th (ft)	=/4.10							
Depth to Water	(ft):	=329 =10 8 1		1.7					
Water Column	(ft):	=10'00'							
Comments:	(10.81) KM		1 volume					
		EM		OBSERVATION					
	7/2016	w , High		Like Other					
Odor:	None Lo	w , (High)	, 120 , 130.						
Comments:	(1/9)								
			FI	ELD PARAMET	ERS				
	Volume	Rate	pH (s.u.)	DO	ORP	Specific Conductance	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
Time	(gal)	(mL/min)	+/- 0.1 s,u,	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	+/- 3%	<10 NTU	
1045	SMR	- PVR	h E			62 32			3326
	3	250	7.13	1.24	-976	1.013	17.71	0.8	4-32-
1050	-	250	7.13	0.73	~707.3		1757	0.0	3.32
1055	-	+	7.13	0.61	-120,2	1.066	1737	00	332
1100	 -	250	+		-121.3	1.074	17.24	<u> </u>	3.35
1105	 	250	7.13	0.56	-122.9	1.088	17.11	0.7	
1110	<u> </u>	250	7.14	0.51	-106.1	11000	1	,	3:32
1115	<u>></u> 1	AMPi	<u>E</u>		 				
						ļ	 	├	
					<u> </u>	ļ	<u> </u>	↓	
	 								
		1	1				·	l	<u> </u>
		 	+						
				· SAMPLING					
Date: C/4/	20	- 4 1	8-0	Time: //		orah			
Sample ID: (omc-s	T-MW	-)) (b. 44		mple Collection:	grab			
Analytical Pa	rameters: ¥	IOCS, PI	CBJ. MNI	O		J 49 NA	LO EUS		
Q.C. Sample	Туре:	MS/MSD	Duplicate	Duplicate Sai	mple ID: 5 HW	IC AS PA	rycon.		
Q.C. Parame	eters: SA	MEAJ	DAREN	11					
Trash picked	7		Well locked?	Y					
SIGNED/SAI	MPLER: () /						
			Z						
		// (. 1						

				<u>Monitori</u>	ng Well				
			Field	Data Sheet - O	MC Groundwater	Site			
Well Number:	37-MW	-5D F	ield Crew: 그	anle		Purpose of Samplin	.g: (OMC Quart	erly Sampling
Site:	OMC	F	ield Conditions:	75°F	Sunny				
		4		ELL CONDITIO	<u>N</u> _				
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Casir	¹⁹ (Acceptable	Not Acceptable	Explain:					
Well Casing	9	Acceptable	Not Acceptable	Explain:					
Locking Cap	C	Acceptable >	Not Acceptable	Explain:					
Well Label (outs	side)	Acceptable	Not Acceptable	Explain:					
Well Label (inside	de)	Apceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:					
Date: 6/4/2	7.0	Time: 694			ow-flow				
Total Well Dept		= 25.45							
Depth to Water		= 3.25							
Water Column		= 12.10		3.6					
			•	1 volume					
Comments:									
				OBSERVATION	s				
Odor:	None , Lo	w , High	, H₂S , Fuell	ike , Other:					
Comments:									
			FII	ELD PARAMET		Specific	Temp	Turbidity	Depth to water
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	(mg/L)	ORP (mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)
			+/- 0.1 s.u.	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	<u> </u>
0915	STA	RT P	WREIE			<u> </u>	///	2 5	332
6920	0.5	375	742	0.96	-123.2	1.752	14-67	13.0	332
0925	1.0	375	7.41	0.65	-1344	1.344	14.47	10.0	3.52
0150	1.5	345	741	0.58	-135.8	1358	14.40	8.9	12.72
0935	2.0	375	7.42	0.56	-136.6	1060	14.47		735
0940	2.5	375	7.42	052	-138.1	0.919	14.41	9.1	3.32
		375	7.42	0.50	7382	1	1438	8.6	332
6745	3.0		7.42	0.49	-140.0	8.962	1432	9.9	332
0550	38	375		0.47		0.901	14.41		3.32
0955	40	375	7.43	6.46	-139.9	0.896			733
1800	4.5	379					14.48		3.33
1005	2-0	375	7.43	0.45	-137.8	0.888	+	4.7	3.22
1010	Son	1PLE			<u> </u>	1	1 137	<u></u>	<u></u> _
				SAMPLING					
Date: 6/4	1/20			Time: /0/	0				
Sample ID: /	PIMC-	ST-Mu	2-5D	Method of Sar	mple Collection:	grab			
Analytical Pa	rameters: U	nc. Dr	BS, MA	JA					
Q.C. Sample	Tune: LIA	MS/MSD	Duplicate	Duplicate Sar	nple ID: NA				
	1.		- alversa						
Q.C. Parame		\leftarrow	Well locked?						
Trash picked		1	Aneil locked t						
SIGNED/SAI	MPLER:	XX	}	-					
		1 <							
		-							

		 			ing wen				
	ادد				OMC Groundwate				
Well Number			•	5'mac	_	Purpose of Samp	oling:	OMC Qu	arterly Sampling
Site:	OMC		Field Conditions:	WELL CONDIT	30200				
Well Pad		Acceptable	Not Acceptable	Explain:	ION				<u> </u>
Protective Ca	sing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acteptable	Not Acceptable	Explain:					
Well Label (or	utside)	Acceptable	Not Acceptable	Explain:					
Well Label (in	side)	Acoptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:	MO die				
				PURGE METH					-
Date: (p/C	1/2020 pth (ft)	Time: 08		Method:	low-flac)			
Depth to Water	er (ft):	= 5.41		. 1					
Water Column	n (ft):	= 29.6	,4	4,+					
Comments:			•	1 volume					
Odor	None). L	ou. High		OBSERVATION	VS		200		
Odor:	lvone), Li	ow , High	, M ₂ S , Fuel	Like , Other:					
Comments:									
			Fil	ELD PARAMET	ERS				
Time	Volume	Rate		ро	ORP	Specific	Temp	Turbidity	Depth to water
Time	(gal)	(mL/min)	pH (s.u.)	(mg/L)	(mV)	(mS/cmc)	(°C)	(NTU)	(feet)
1825	1	30	+/- 0.1 s,u,	4-10% Ce-9	2364	1-391	W57	<10 NTU	5-7-
0830	+ /	300	7-08	5.2	2206	1.409	13.05	0.6	5.55
0835			7.16	4.49	212.6	1.409	1293	0	5.55
0840		30			2(1.1			<u> </u>	+
	1 1	300	7-18	0.49		1-410	13.05	0	5.55
0845	+ + -	300	7.21	0.46	207-4	1,407	12.93		822
0850	1 1/	300	7.25	0.45	202.3	1.407	13-06	0	5.55
855	<u>V</u>	300	725	0.43	193.4	1.407	13.03	0	5.55
0500	Mari	300	7.29	0.43	1930	1,403	12.86	0	2.62
0905			4						
	<u> </u>	ruple	1 @ 09i	0 + 0	915 CFE	5) (A)			
		'			12)			
6	am			SAMPLING					
Date: 3/	244 60	141202	D	Time: 6-0	710 + 09	15 (FP)	and		
Sample ID:	MC-V			Method of Sam		(R)			
Analytical Para	meters:	r. di 453	lied met	- lc	1 A	()			
Q.C. Sample T		MS/MSD	Duplicate	Duplicate Sami	ole ID: OMC~	11-5-R			
Q.C. Paramete		A		,		VV -U - 1	•		
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Attachment 2 Data Usability Evaluation



Data Usability Evaluation—June 2020 OMC Plant 2 Site (OU4), Waukegan, Illinois WA No. 237-RARA-0528, Contract No. EP-S5-06-01

PREPARED FOR: U.S. Environmental Protection Agency (EPA)

PREPARED BY: Nichole Boyea/CH2M HILL, Inc. (CH2M)

DATE: August 7, 2020

This memorandum presents the results of the data usability evaluation of groundwater data from the Outboard Marine Corporation (OMC) Plant 2 Site in Waukegan, Illinois. Groundwater samples were collected June 1 through 4, 2020, and analyzed by either the subcontract laboratory, Katahdin Analytical, or a laboratory in EPA's Contract Laboratory Program (CLP). The analytical results will be used to evaluate the performance of the in situ treatment of the remining high-concentration source areas and the sitewide monitored natural attenuation remedy.

- A total of 84 aqueous samples, including quality assurance (QA)/quality control (QC) samples (7 field duplicates [FDs], 4 matrix spikes [MSs], 4 matrix spike duplicates [MSDs], 4 trip blanks [TBs], 1 equipment blank [EB], and 1 field blank [FB]), was analyzed for volatile organic compounds (VOCs).
- A total of 76 aqueous samples, including QA/QC samples (7 FDs, 4 MS/Duplicate, 1 EB, and 1 FB) was analyzed for dissolved metals.
- A total of 27 aqueous samples, including QA/QC samples (2FDs, 2 MSs, 2 MSDs, 1 EB, and 1 FB) was analyzed for PCB Aroclors.
- A total of 80 samples was analyzed for monitored natural attenuation (MNA) parameters (alkalinity, anions [chloride, nitrate, nitrite, sulfate], sulfide, dissolved gases [methane, ethane, ethene], and total organic carbon [TOC]), including QA/QC samples (7 FDs, 4 MSs, 4 MSDs, 1 EB, and 1 FB).

Table 1 lists the parameters, methods, and the laboratory performing the analysis.

Table 1. Analytical Parameters

Data Usability Evaluation—June 2020 OMC Plant 2 Site (OU4), Waukegan, Illinois

Parameter Class	Method	Laboratory Type	Laboratory
VOCs	CLP SOW SOM02.4	CLP Lab	ChamTach Canculting Croup
PCB Aroclors	CLP SOW SOM02.4	CLP Lab	ChemTech Consulting Group
Dissolved Metals (Arsenic, Iron, Manganese)	CLP SOW ISM02.4	CLP Lab	Mountainside, New Jersey
Alkalinity	SM 2320B	Subcontract Lab	
Anions (Chloride, Nitrate, Nitrite, Sulfate)	EPA 300.0, EPA 325.2, EPA 353.2, EPA 375.4	Subcontract Lab	Katahdin Analytical Services
Sulfide	SW 846 9034	Subcontract Lab	Scarborough, Maine
Dissolved Gases (Methane, Ethane, Ethene)	RSK175	Subcontract Lab	
TOC*	SW846 9060	Subcontract Lab	Katahdin Analytical Services Scarborough, Maine and Furofins TestAmerica, Savannah, Georgia

^{*}Select TOC samples were analyzed by a Katahdin subcontracted laboratory (Eurofins TestAmerica) due to a temporary instrument malfunction.

As part of the QA process outlined in the site-specific quality assurance project plan (QAPP) (CH2M 2013), QAPP Addendum II (CH2M 2017), and QAPP Addendum III (CH2M 2019), QC samples were collected in the field to complement the assessment of overall data quality and usability. The QC samples consisted of FDs, aliquots for laboratory MS/MSD, FB, EB, and VOC TB samples. Table 2 presents the sample delivery groups (SDGs), sample identifications (IDs), and station locations.

Table 2. Sample Identification

Data Usability Evaluation—June 2020

OMC Plant 2 Site (OU4), Waukegan, Illinois

		CLP Organics		CLP Inc	rganics	Subcontract MNA			
Well ID	CLP#	VOC SDG	PCB SDG	CLP#	Metals SDG	SAS#	MNA SDG	TOC SDG	
OMC-MW-11D	ETTP6	ETTP6	-	METTP6	METTP6	20CO03-01	SN4244	SN4244	
OMC-MW-11D-R	ETTP7	ETTP6	-	METTP7	METTP6	20CO03-02	SN4244	SN4244	
OMC-MW-11S	ETTQ0	ETTP6	-	METTQ0	METTP6	20CO03-05	SN4244	SN4244	
OMC-MW-3D	ETTP9	ETTP6	ETTP9	METTP9	METTP6	20CO03-04	SN4244	SN4244	
OMC-MW-3S	ETTQ1	ETTP6	-	METTQ1	METTP6	20CO03-06	SN4244	SN4244	
OMC-MW-501D	ETTQ2	ETTR9	ETTP9	METTQ2	METTQ2	20CO03-07	SN4356	SN4356	
OMC-MW-501S	ETTQ3	ETTR9	ETTP9	METTQ3	METTQ2	20CO03-08	SN4356	SN4356	
OMC-MW-513D	ETTQ4	ETTP6	-	METTQ4	METTP6	20CO03-09	SN4244	SN4244	
OMC-MW-513S	ETTQ5	ETTP6	-	METTQ5	METTP6	20CO03-10	SN4244	SN4244	
OMC-MW-516D	ETTP8	ETTP6	-	METTP8	METTP6	20CO03-03	SN4356	J185570	
OMC-MW-516S	ETTQ6	ETTP6	-	METTQ6	METTP6	20CO03-11	SN4356	SN4356	
OMC-MW-528D	ETTQ7	ETTP6	-	METTQ7	METTP6	20CO03-12	SN4356	SN4356	
OMC-MW-528S	ETTQ8	ETTP6	-	METTQ8	METTP6	20CO03-13	SN4244	SN4244	
OMC-MW-600D	ETTQ9	ETTP6	-	METTQ9	METTP6	20CO03-14	SN4244	SN4244	
OMC-MW-600S	ETTR0	ETTP6	-	METTR0	METTP6	20CO03-15	SN4244	J185565	
OMC-MW-601D	ETTR1	ETTR9	-	METTR1	METTQ2	20CO03-16	SN4416	SN4416	
OMC-MW-601S	ETTR2	ETTR9	-	METTR2	METTQ2	20CO03-17	SN4416	SN4416	
OMC-MW-602D	ETTR3	ETTR9	-	METTR3	METTQ2	20CO03-18	SN4356	SN4356	
OMC-MW-602D-R	ETTR4	ETTR9	-	METTR4	METTQ2	20CO03-19	SN4356	SN4356	
OMC-MW-602S	ETTR5	ETTP6	-	METTR5	МЕТТР6	20CO03-20	SN4285	SN4285	
OMC-MW-603D	ETTR6	ETTP6	-	METTR6	МЕТТР6	20CO03-21	SN4244	J185565	
OMC-MW-603S	ETTR7	ETTP6	-	METTR7	METTP6	20CO03-22	SN4244	J185565	
OMC-MW-604D	ETTR8	ETTR8	-	METTR8	МЕТТР6	20CO03-23	SN4285	SN4285	
OMC-MW-604S	ETTR9	ETTR9	-	METTR9	METTR9	20CO03-24	SN4285	SN4285	
OMC-MW-605D	ETTS0	ETTR8	-	METTS0	METTR9	20CO03-25	SN4356	SN4356	
OMC-MW-605D-R	ETTS1	ETTR8	-	METTS1	METTR9	20CO03-26	SN4356	SN4356	
OMC-MW-605S	ETTS2	ETTR8	-	METTS2	METTR9	20CO03-27	SN4356	SN4356	
OMC-MW-606D	ETTS3	ETTR9	-	METTS3	METTQ2	20CO03-28	SN4416	SN4416	
OMC-MW-606S	ETTS4	ETTR9	-	METTS4	METTQ2	20CO03-29	SN4416	SN4416	
OMC-MW-607D	ETTS5	ETTS5	-	METTS5	METTQ2	20CO03-30	SN4416	SN4416	

Table 2. Sample Identification

Data Usability Evaluation—June 2020 OMC Plant 2 Site (OU4), Waukegan, Illinois

	CLP Organics			CLP Inorganics		Subcontract MNA		
Well ID	CLP#	VOC SDG	PCB SDG	CLP#	Metals SDG	SAS#	MNA SDG	TOC SDG
OMC-MW-607S	ETTS6	ETTR9	-	METTS6	METTQ2	20CO03-31	SN4356	SN4356
OMC-MW-610D	ETTS7	ETTR8	ETTP9	METTS7	METTR9	20CO03-32	SN4285	SN4285
OMC-MW-610S	ETTS8	ETTR8	ETTP9	METTS8	METTR9	20CO03-33	SN4285	SN4285
OMC-MW-612D	ETTS9	ETTR9	-	METTS9	METTQ2	20CO03-34	SN4356	SN4356
OMC-MW-612S	ETTT0	ETTR8	-	METTT0	METTR9	20CO03-35	SN4356	SN4356
OMC-MW-612S-R	ETTT1	ETTR8	-	METTT1	METTR9	20CO03-36	SN4356	SN4356
OMC-MW-613D	ETTT2	ETTR9	ETTP9	METTT2	METTQ2	20CO03-37	SN4356	SN4356
OMC-MW-613S	ETTT3	ETTR9	-	METTT3	METTQ2	20CO03-38	SN4356	SN4356
OMC-MW-614D	ETTT4	ETTR9	-	METTT4	METTQ2	20CO03-39	SN4356	SN4356
OMC-MW-614S	ETTT5	ETTR9	-	METTT5	METTR9	20CO03-40	SN4356	SN4356
OMC-MW-615D	ETTT6	ETTP6	-	METTT6	МЕТТР6	20CO03-41	SN4244	J185565
OMC-MW-615S	ETTT7	ETTP6	-	METTT7	МЕТТР6	20CO03-42	SN4244	J185565
OMC-MW-619D	ETTT8	ETTR8	-	METTT8	METTR9	20CO03-43	SN4356	SN4356
OMC-MW-619S	ETTT9	ETTR8	-	METTT9	METTR9	20CO03-45	SN4356	SN4356
OMC-MW-620D	ETTW0	ETTS5	-	METTW0	METTQ2	20CO03-46	SN4416	SN4416
OMC-MW-620S	ETTW1	ETTS5	-	METTW1	METTQ2	20CO03-47	SN4416	SN4416
OMC-MW-621D	ETTW2	ETTS5	-	METTW2	METTW2	20CO03-48	SN4416	SN4416
OMC-MW-621S	ETTW3	ETTS5	-	METTW3	METTW2	20CO03-49	SN4416	SN4416
OMC-MW-621S-R	ETTW4	ETTS5	-	METTW4	METTW2	20CO03-50	SN4416	SN4416
OMC-MW-623D	ETTW5	ETTR8	ETTP9	METTW5	METTR9	20CO03-51	SN4356	SN4356
OMC-MW-623S	ETTW6	ETTS5	ETTW6	METTW6	METTW2	20CO03-52	SN4416	SN4416
OMC-MW-624D	ETTX8	ETTS5	ETTW6	METTX8	METTW2	20CO03-53	SN4416	SN4416
OMC-MW-624S	ETTW7	ETTS5	ETTW6	METTW7	METTW2	20CO03-54	SN4416	SN4416
OMC-MW-625D	ETTY2	ETTR8	-	METTY2	METTR9	20CO03-68	SN4285	SN4285
OMC-MW-625S	ETTY3	ETTR8	-	METTY3	METTR9	20CO03-69	SN4285	SN4285
OMC-MW-626D	ETTY4	ETTS5	-	METTY4	METTW2	20CO03-70	SN4416	SN4416
OMC-MW-626S	ETTY5	ETTR9	-	METTY5	METTQ2	20CO03-71	SN4356	SN4356
OMC-ST-MW-1D	ETTX9	ETTR8	ETTP9	METTX9	METTR9	20CO03-57	SN4285	SN4285
OMC-ST-MW-1S	ETTX0	ETTR8	ETTP9	METTX0	METTR9	20CO03-58	SN4285	SN4285
OMC-ST-MW-1S-R	ETTX1	ETTR8	ETTP9	METTX1	METTR9	20CO03-59	SN4285	SN4285
OMC-ST-MW-2D	ETTX2	ETTR8	ETTP9	METTX2	METTR9	20CO03-60	SN4356	SN4356
OMC-ST-MW-2S	ETTX3	ETTP6	ETTP9	METTX3	METTP6	20CO03-61	SN4285	SN4285
OMC-ST-MW-3D	ETTX4	ETTR8	ETTP9	METTX4	METTR9	20CO03-62	SN4356	SN4356
OMC-ST-MW-3S	ETTX5	ETTR8	ETTP9	METTX5	METTR9	20CO03-63	SN4356	SN4356
OMC-ST-MW-4D	ETTX6	ETTR9	ETTP9	METTX6	METTQ2	20CO03-64	SN4356	SN4356

Table 2. Sample Identification

Data Usability Evaluation—June 2020 OMC Plant 2 Site (OU4), Waukegan, Illinois

	CLP Organics			CLP Inorganics		Subcontract MNA		
Well ID	CLP#	VOC SDG	PCB SDG	CLP#	Metals SDG	SAS#	MNA SDG	TOC SDG
OMC-ST-MW-4S	ETTX7	ETTS5	ETTW6	METTX7	METTW2	20CO03-65	SN4416	SN4416
OMC-ST-MW-5D	ETTY0	ETTS5	ETTW6	METTY0	METTW2	20CO03-66	SN4416	SN4416
OMC-ST-MW-5S	ETTY1	ETTS5	ETTW6	METTY1	METTW2	20CO03-67	SN4416	SN4416
OMC-W-5	ETTW8	ETTS5	ETTW6	METTW8	METTW2	20CO03-55	SN4416	SN4416
OMC-W-5-R	ETTW9	ETTS5	ETTW6	METTW9	METTW2	20CO03-56	SN4416	SN4416
OMC-EB060320	ETTY6	ETTR9	ETTP9	METTY6	METTQ2	20CO03-72	SN4356	SN4356
OMC-FB060320	ETTY7	ETTR9	ETTP9	METTY7	METTQ2	20CO03-73	SN4356	SN4356
OMC-TB01-060120	ETTY8	ETTP6	-	-	-	-	-	-
OMC-TB02-060220	ETTY9	ETTR8	-	-	-	-	-	-
OMC-TB03-060320	ETTZ0	ETTR9	-	-	-	-	-	-
OMC-TB04-060420	ETTZ1	ETTS5	-	-	-			

CLP = contract laboratory program; SAS# = service analytical sample number; SDG# = sample delivery group; VOC = volatile organic compound; PCB = polychlorinated biphenyls/Aroclors; MNA = monitored natural attenuation (alkalinity, anions, sulfide, and dissolved gases); TOC = total organic carbon

Subcontract Laboratory Data

Alkalinity, anions (chloride, nitrate, nitrite, sulfate), sulfide, dissolved gases (methane, ethane, ethene), and total organic carbon were analyzed by Katahdin Analytical and their subcontractor TestAmerica and reported in SDGs SN4244, SN4285, SN4356, SN4416, J185565, and J185570. CH2M performed a level III review on 100 percent of the data set that included validating the data set that included 63 native samples (4 of which were designated as MS/MSD samples), 7 FD samples, 1 EB, and 1 FB, for a total of 72 field samples.

The data were reviewed to assess their analytical accuracy, precision, and completeness. The review was conducted in accordance with the site-specific QAPP (CH2M 2013). A forms review was conducted on 100 percent of the definitive data.

The forms review consisted of a review of the following QC items:

- Holding times and sample receipt conditions
- Required QC samples at the specified frequencies
- Laboratory control sample precision and accuracy
- MS/MSD precision and accuracy
- Blank contamination and, if any, its impact on the analytical results
- Initial calibration and continuing calibration precision and accuracy
- Laboratory and FD precision
- Method Reporting Limit check precision and accuracy

The QA/QC limits implemented during the data quality evaluation were those listed in the site-specific QAPP. Standard data qualifiers were added as a means of classifying the data as to their conformance to QA/QC requirements. The data qualifiers are defined as follows:

[J] Estimated. The analyte was below the stated reporting limit, but greater than the method detection limit, or there is an analytical bias.

- [J+] Biased High. The analyte was positively identified, but the associated numerical value is approximate (metals only).
- [J-] Biased Low. The analyte was positively identified, but the associated numerical value is approximate (metals only).
- [U] Undetected. The analyte was analyzed for but not detected at a concentration equal to or greater than the laboratory reporting limit.
- [UJ] Estimated. The component was analyzed for but was not detected at a level equal to or greater than the level of detection. This flag is used when QC measurements indicate a possible low bias in the analytical data.

The analytical results were within project control limits, except where noted in the following subsections. Attachment 1 lists the validator applied qualifiers.

Hold Time and Sample Integrity

Several samples were analyzed with improper preservation, exceedance of hold time, or other bias. These cases are outlined below:

Dissolved gas samples require preservation to a pH less than 2. Laboratory technicians reported that several samples were found to have a pH greater than 2 at the time of analysis, including 2 samples in SDG SN4285 (20C003-23 and 20C003-68), 4 samples in SDG SN4356 (20C003-25, 0C003-26, 20C003-34, and 20C003-60), and 3 samples in SDG SN4416 (20C003-28, 20C003-46, and 20C003-48). The samples were collected in vials containing the appropriate preservative, and the laboratory presumed that the high pHs were likely a result of either matrix effect or preservative inadvertently diluted out in the field by filling the vial with excess sample material. The samples were analyzed within the standard hold time, but the improper preservation may have allowed for microbial conversion or other degradation to the sample. Therefore, CH2M validators used professional judgement to qualify results conservatively as estimated: detects "J" and nondetects "UJ"

Methane concentrations exceeded the upper calibration range in sample 20CO03-27, which was supposed to be reanalyzed. However, the sample was dropped by the laboratory analyst during dilution, and the original concentration had to be reported. There was no additional sample volume available for reanalysis. The result has been qualified as estimated "J+".

Analysis for chloride, nitrate, nitrite, and sulfate in SDG SN4356 was originally performed via method EPA 300.0, but analysts repeatedly observed run QC and laboratory control sample (LCS) failures, poor recoveries, and unusual chromatograms. Some nitrate and nitrite results were bracketed by acceptable standards and were reported. The remaining samples were reanalyzed via conventional wet chemistry methods: chloride, nitrate, and nitrite via colorimetric methods 325.2 and 353.2, and sulfate by turbidity (method EPA 375.4). Colorimetric analysis for nitrate and nitrite was performed outside of the standard 48-hour hold time. Detected samples were qualified as estimated "J", and nondetected results were rejected.

Due to temporary TOC instrument malfunction that required downtime for repairs, Katahdin shipped the samples to a subcontracted laboratory in attempt to conduct the analysis prior to the method hold time expired. After discussion, CH2M determined that, though hold time exceedances were inevitable, Katahdin would be the laboratory to complete analysis. However, some samples were analyzed while in custody of the subcontracted laboratory; these were analyzed within hold time and reported in SDGs J185565-1 and J185570-1 and incorporated into Katahdin's analytical reports (SN4244 and SN4356). The TOC samples reported in SDGs SN4356 and SN4416 are those analyzed after hold time expiration. CH2M validators determined that sample integrity was not significantly impacted by the exceedance,

and results were qualified as estimated "J". A corrective action report was submitted by the laboratory and is provided in Attachment 1.

Due to laboratory error, alkalinity in samples 20CO03-01, 20CO03-03, 20CO03-30, 20CO03-47, 20CO03-49, 20CO03-50, 20CO03-56, 20CO03-65, and 20CO03-66 were analyzed outside of the standard 14-day hold time. CH2M validators determined that sample integrity was not significantly compromised due to this exceedance, and the results were qualified as estimated "J". A corrective action report was submitted by the laboratory and is provided in Attachment 1.

TOC in sample 20CO03-23 was analyzed 2 days outside the standard 28-day hold time. CH2M validators determined that the sample integrity was not significantly compromised due to this exceedance, and the result was qualified as estimated "J".

Chloride and sulfate results in sample 20CO03-57 exceeded the upper calibration range of the instrument, and the run was contaminated by sulfate. However, the remaining sample volume was consumed for alkalinity analysis, and the sample could not be re-analyzed. Results were qualified as estimate biased high "J+".

Blank Samples

Field and laboratory blank samples were analyzed at required frequencies. However, there were several instances of target analyte detections in blanks. Qualification of associated samples was determined as follows:

In cases where an analyte was detected below the reporting limit (RL) in a blank and the associated project sample results exceeded 5 times the blank concertation, no qualification was required. In cases where an analyte was detected below the RL in a blank and the associated project sample results were detected below the RL or at concentrations less than 5 times the blank concertation, the analyte was qualified as nondetect "U"; the result value was either elevated to the RL or, in cases where the original result was above the RL, reported at the original value.

Method Blanks

SDG SN4244:

- Nitrate was qualified nondetect "U", and result values were elevated to the RL in samples 20CO030-01, 20CO03-09, and 20CO03-14.
- Nitrate was qualified nondetect "U" and reported at the original result values in samples 20C003-04, 20C003-05, 20C003-06, 20C003-10, and 20C003-42.
- TOC was qualified nondetect "U" and reported at the original result values in samples 20C003-06 and 20C003-13.

SDG SN4356:

- Nitrate was qualified nondetect "U" and reported at the original result value in sample 20CO03-07.
- Sulfate was qualified nondetect "U", and the result vale was elevated to the RL in sample 20CO03-03.

Field Blanks

The FB (20CO03-73) had concentrations of alkalinity, methane, sulfate, and TOC detected below the RL, and chloride detected above the RL. This blank is associated with samples collected June 3, 2020.

SDG SN4285:

- Chloride was qualified nondetect "U" and reported at the original result values in samples 20C003-20, 20C003-69, 20C003-58, and 20C003-59.
- Chloride was qualified nondetect "U" and reported at the original result values in samples 20CO03-08, 20CO03-17, 20CO03-31, 20CO03-38, 20CO03-40, 20CO03-45, 20CO03-47, 20CO03-52, and 20CO03-54.

Equipment Blanks

The EB (20CO03-72) had concentrations of alkalinity, methane, sulfide, and TOC detected below the RL, and sulfate detected above the RL. This blank is associated with all samples collected.

SDG SN4244:

 Methane was qualified nondetect "U", and result values were elevated to the RL in samples 20CO03-05 and 20CO03-41.

SDG SN4285:

- Sulfate was qualified as nondetect "U", and the result value was elevated to the RL in sample 20CO03-24.
- Sulfide was qualified as nondetect "U", and result values were elevated to the RL in samples 20C003-33 and 20C003-57.
- Methane was qualified as nondetect "U", and the result value was elevated to the RL in sample 20C003-33.

SDG SN4356:

- Sulfate was qualified nondetect "U", and the result value was elevated to the RL in sample 20C003-03.
- Sulfate was qualified nondetect "U", and reported at the original sample result value in sample 20CO03-08.
- Sulfide was qualified nondetect "U", and result values were elevated to the RL in samples 20C003-03, 20C003-39, and 20C003-63.
- Sulfide was qualified nondetect "U" and reported at the original sample result values in samples 20C003-18, 20C003-35, 20C003-36, 20C003-43, 20C003-45, and 20C003-64.
- Methane was qualified nondetect "U", and the result value was elevated to the RL in sample 20C003-12.

SDG SN4416:

- Sulfide was qualified nondetect "U", and the result values were elevated to the RL in samples 20C003-54, 20C003-67, and 20C003-55.
- Sulfide was qualified nondetect "U" and reported at the original sample result values in samples 20CO03-29, 20CO03-52, and 20CO03-70.

Matrix Spike/Matrix Spike Duplicate

MSs and MSDs were analyzed at the appropriate frequency of 1 per 20 samples, and generally accuracy and precision criteria were met, with the following exceptions:

- In SDG SN4356, MS and MSD samples were run using parent sample 20C003-03.
 - Chloride recovered below the lower control limit (LCL) in both the MS and MSD. The parent sample concentrations exceeded 4 times the spike concentration; no qualification was required.
 - Methane recovered below the LCL in the MS sample. The parent sample concentrations exceeded 4 times the spike concentration; no qualification was required.
 - Sulfate recovered below the LCL in both MS and MSD. The parent sample was qualified as estimated biased low "J-".
 - Nitrate recovered below the LCL in the MS. The recovery was within National Functional Guidelines (NFG; EPA 2016) criteria, and CH2M validators used professional judgment to qualify based on the more conservative laboratory criteria. Nitrate was nondetect in the parent sample, and the result was qualified as estimated nondetect "UJ".
- In SDG SN4356, MS and MSD samples were run using parent sample 20CO03-60.
 - Nitrite's recovery exceeded the upper control limit (UCL) in both the MS and MSD. Nitrite was qualified as estimated biased high "J+" in the parent sample.
 - Methane's recovery exceeded the UCL in both the MS and MSD. The concentrations in the parent sample were greater than 4 times the spike concentration for methane; no qualification was required.
 - Chloride recovered below the LCL in the MS, and the parent sample was qualified as estimate biased low "J-".
 - Sulfate recovered was below the LCL in the MSD sample, but as parent concentrations exceeded
 4 times the spike, no qualification was required.
- In SDG SN4416, MS and MSD samples were run using parent sample 20C003-17.
 - Methane recovered below LCL in the MS and above the UCL in the MSD. Methane concentrations in the parent sample were greater than 4 times the spike, and no qualification was required.
 - Sulfate recovered below the LCL in both MS and MSD, and was qualified as estimate biased low "J-" in the parent sample.
 - Nitrite's recovery exceeded the UCL in both MS and MSD, and was qualified as estimate biased high "J+" in the parent sample.
- In SDG SN4416, MS and MSD samples were run using parent sample 20CO03-67.
 - Methane, ethane, chloride, and sulfate had recoveries below the LCL in both the MS and MSD samples. Methane concentrations in the parent sample were greater than 4 times the spike, and no qualification was required. Ethane was nondetect in the parent sample and was qualified as estimated nondetect "UJ". Chloride and sulfate were qualified as estimated biased low "J-" in the parent sample.
 - Nitrite's recovery exceeded the UCL in both MS and MSD samples and the parent sample was qualified as estimate biased high "J+".

Field Duplicates

A total of 7 FD samples were collected for analysis, meeting the minimum frequency of 1 per 10 field samples. FD samples were collected immediately following the parent sample and analyzed for the same parameters. The precision criteria, a relative percent difference (RPD) of less than 30 percent, was met with the following exceptions:

• In SDG SN4416, the RPD for chloride and sulfate exceeded criteria in parent sample 20CO03-49 and duplicate sample 20CO03-50. Chloride and sulfate were detected in both parent and duplicate and were qualified as estimated "J".

Laboratory Control Sample

LCSs were analyzed as required by the laboratory and generally, criteria were met, with the following exception:

SDG SN4285:

 Sulfide's recovery exceeded the laboratory UCL in LCS WG279535-2. Though the recovery was within NFG criteria, CH2M validators used professional judgment to implement the more stringent laboratory criteria. Sulfide was qualified as estimate biased high "J+" in the associated sample, 20CO03-57.

Contract Laboratory Program Data

The samples were analyzed for VOCs by a laboratory in EPA's CLP. EPA's Environmental Service Assistance Team (ESAT) contractor, Techlaw, reviewed the data set from the laboratory to assess the accuracy and precision of the method and the matrix using criteria established in the NFG (EPA 2017) and verified that the data set was complete. ESAT validators also added data qualifiers when the QC statistics indicated a possible bias to specific compounds or analytes associated with a particular method and sample batch.

Standard data qualifiers are a means to classify the data with regard to their conformance to QC requirements. The applied data qualifiers are defined as follows:

- [U] The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- [J] The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- [J+] The result is an estimated quantity; the results may be biased high.
- [J-] The result is an estimated quantity; the results may be biased low.
- [UJ] The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and to precisely measure the analyte in the sample.
- [R] The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

CH2M reviewed the validation performed by Techlaw for the groundwater samples in Case Number 48662. The data were reported in the following SDGs: ETTP6, ETTR8, ETTR9, and ETTS5 are associated with VOC analysis, ETTP9 and ETTW6 are associated with PCB Aroclor analysis, and METTP6, METTQ2, METTR9, and METTW2 are associated with dissolved metals. The VOC and dissolved metals data set includes 63 native samples (of which 4 were designated MS/MSD samples), 7 FD samples, 1 FB, and 1 EB, and 2 VOC TBs, for a total of 74 and 72 field samples, respectively. The PCB Aroclor data set

included 22 native samples (2 of which were designated as MS/MSD samples), 2 FDs, 1 FD, and 1 EB, for a total of 26 samples.

The EPA validation case narrative worksheets indicate that some sample results should be qualified as estimated based on the applicable QC statistics or other NFG requirements. Attachment 2 lists the CH2M validator applied qualifiers. Attachment 3 contains the ESAT narratives and worksheets.

Validation of Field Quality Control Samples

EPA's ESAT validators, Techlaw, reviewed field QC samples, including FB and EB samples, and FDs, but did not qualify results. CH2M validators reviewed the aforementioned field QC samples and VOC TB samples in accordance with the QAPP. QC criteria were generally met, except where outlined in the following subsections.

Blanks

Blank samples were analyzed at required frequencies, including 1 EB, 1 FB, and 4 TBs. Field and laboratory blank samples were analyzed at required frequencies. However, there were several instances of target analyte detections in blanks. Qualification of associated samples was determined as follows:

In cases where an analyte was detected below the RL in a blank and the associated project sample results exceeded 5 times the blank concertation, no qualification was required. In cases where an analyte was detected below the RL in a blank and the associated project sample results were detected below the RL or at concentrations less than 5 times the blank concertation, the analyte was qualified as nondetect "U"; the result value was either elevated to the RL or, in cases where the original result was above the RL, reported at the original value.

- TB ETTY8; associated with VOC samples shipped June 1, 2020.
 - Acetone was qualified nondetect "U", and result values were elevated to the RL per NFG criteria in samples ETTP6, ETTP7, and ETTQ9.
- TB ETTY9; associated with samples shipped June 2, 2020.
 - Acetone was qualified nondetect "U", and at the result values were elevated to the RL per NFG criteria in samples ETTP8, ETTS7, ETTT0, and ETTX0.
- TB ETTZ0; associated with samples shipped June 3, 2020.
 - Toluene was qualified nondetect "U", and the result value was elevated to the RL per NFG criteria in sample ETTT4.
- EB ETTY6; associated with all samples collected during this event.
 - Acetone was qualified nondetect "U", and result values were elevated to the RL per NFG criteria in samples ETTP6, ETTP7, ETTP8, ETTQ9, ETTS0, ETTS7, ETTT0, ETTT8, ETTX0, ETTX2, ETTR1, ETTR3, ETTR4, and ETTT4.
- FB ETTY7; associated with all samples collected June 3, 2020.
 - Acetone was qualified nondetect "U", and result values were elevated to the RL per NFG criteria in samples ETTT8, ETTX2, ETTR3, ETTR4, ETTS9, and ETTT4.

Field Duplicate Samples

A total of 4 FD samples was collected for VOC and dissolved metals analysis, and 2 were analyzed for PCB Aroclor analysis, meeting the minimum frequency of 1 per 10 field samples. FD samples were collected immediately following the parent sample and analyzed for the same parameters. The precision

criteria, a relative percent difference (RPD) of less than 30 percent, was met for all with the following exception:

• Methyl acetate exceeded RPD criteria in parent sample ETTR3 and duplicate ETTR4. Methyl acetate was detected in both samples and qualified estimated "J".

Findings

The following subsections summarize the data validation findings and usability of the final reportable results. The sample numbers and locations do not include QA/QC samples.

Volatile Organic Compound Data

The VOC data set consists of the results for 51 analytes for each of the 63 monitoring well samples, excluding QA/QC samples, for a total of 3,213 results.

The data validation summary indicates the following:

- J, J-, J+, U, and UJ qualifiers were applied to sample results that were potentially affected by QC deficiencies.
- J qualifiers were applied to sample results that were reported between the MDL and RL.
- Nondetect sample results were qualified U.
- None of the reported VOC data was rejected.

Though the evaluation of blanks and other QA/QC data indicates possible estimate values, the accuracy and precision are generally acceptable, and the data set completeness is deemed as 100 percent usable and may be used in the project decision-making process with qualification.

Polychlorinated Biphenyl Aroclor Data

The PCB Aroclor data set consists of the results for 9 Aroclors for 21 monitoring well samples, excluding QA/QC samples, creating 180 results.

The validation of the PCB Aroclor data indicates the following:

- J and J+ qualifiers were applied to sample results that were potentially affected by QC deficiencies.
- J qualifiers were applied to sample results that were reported between the MDL and RL.
- Nondetect sample results were qualified U.
- None of the reported PCB Aroclor data was rejected.

Though the evaluation of QA/QC data indicates possible estimate values, the accuracy and precision are generally acceptable, and the data set completeness is deemed as 100 percent usable and may be used in the project decision-making process with qualification.

Dissolved Metals Data

The metals data set consists of the results for 3 analytes for each of the 63 monitoring well sample, excluding QA/QC samples, for a total of 189 results. The validation summary of the metals data set indicates the following:

- J, J+, U, and UJ qualifiers were applied to sample results that were potentially affected by QC deficiencies.
- J qualifiers were applied to sample results that were reported between the MDL and RL.
- Nondetect sample results were qualified U.
- None of the reported dissolved metals data was rejected.

Though the evaluation of QA/QC data indicates possible estimate values, the accuracy and precision are generally acceptable, and the data set completeness is deemed as 100 percent usable and may be used in the project decision-making process with qualification.

Alkalinity Data

The alkalinity data set consists of 1 result for 63 monitoring well samples, excluding QA/QC. The validation summary of the alkalinity data indicates the following:

- J qualifiers were applied to sample results that were affected by hold time exceedances.
- J qualifiers were applied to sample results that were reported between the MDL and RL.
- Nondetect sample results were qualified U.
- None of the reported alkalinity data was rejected.

Though several samples were analyzed outside of hold time, the accuracy and precision are generally acceptable, and the data set completeness is deemed as 100 percent usable and may be used in the project decision-making process with qualification.

Anions Data

The anions data set consists of 4 results (chloride, nitrate, nitrite, sulfate) for 63 monitoring well samples, excluding QA/QC samples, for a total of 252 results. The validation summary of the anions data indicates the following:

- J, J-, J+, U, and UJ qualifiers were applied to sample results that were potentially affected by QC deficiencies.
- J qualifiers were applied to sample results that were reported between the MDL and RL.
- Nondetected sample results were qualified U.
- Due to temporary equipment failure, 18 nitrate and nitrite samples were analyzed outside of hold time. Detects were qualified J, and nondetects were rejected. 31 total results were rejected.

For anions, 88 percent of the data, as qualified, can be used to make project decisions.

Sulfide Data

The sulfide data set consists of 1 result for 63 monitoring well samples, excluding QA/QC samples. The validation of the sulfide data indicates the following:

- U qualifiers were applied to sample results that were potentially affected by blank deficiencies.
- J qualifiers were applied to sample results that were reported between the MDL and RL.
- Nondetected sample results were qualified U.
- None of the sulfide data was rejected.

Though the evaluation of blanks data indicates possible estimate values, the accuracy and precision are generally acceptable, and the data set completeness is deemed as 100 percent usable and may be used in the project decision-making process with qualification.

Dissolved Gases Data

The dissolved gases data set consists of 3 results (methane, ethane, ethene) for 63 monitoring well samples, excluding QA/QC samples, for a total of 189 results. The validation of the dissolved gases data indicates the following:

- J, J+, U, and UJ qualifiers were applied to sample results that were potentially affected by QC deficiencies.
- J qualifiers were applied to sample results that were reported between the MDL and RL.
- Nondetected sample results were qualified U.
- Several samples were found to be improperly preserved at time of analysis with pH greater than 2. Samples were qualified as estimated J for potential sample integrity impacts.
- None of the dissolved gases data was rejected.

Though the evaluation of QA/QC data and considering possible effects caused by improper preservation, the data set contains possible estimate values. However, the accuracy and precision are generally acceptable, and the data set completeness is deemed as 100 percent usable and may be used in the project decision-making process with qualification.

Total Organic Carbon Data

TOC data set consists of 1 TOC result for 63 monitoring well samples, excluding QA/QC samples. The validation summary of the TOC data indicates the following:

- The evaluation of blanks data indicates possible bias due to applicable QC statistics. U qualifiers were applied to sample results potentially affected by QC deficiencies.
- J qualifiers were applied to sample results that were reported between the MDL and RL.
- Due to temporary instrument failure, 28 TOC samples were analyzed outside of hold time. These results were qualified J.
- Nondetected sample results were qualified U.
- None of the reported TOC results were rejected.

For TOC, 100 percent of the data, as qualified, can be used to make project decisions.

Overall Assessment

The final activity in the data quality evaluation is an assessment of whether the data meet the data quality objectives. The goal of the assessment was to demonstrate that a sufficient number of representative samples were collected, and the resulting analytical data can be used to support the decision-making process. The following summary highlights the data evaluation findings for the above-defined events:

- The precision and accuracy of the data, as measured by field and laboratory QC indicators, indicate that the data quality objectives were met.
- Some alkalinity, anions, and TOC samples were analyzed outside of hold time. No alkalinity or TOC results
 were rejected, and 100 percent of this data can be considered usable as qualified. Thirty-one anions
 results were rejected, and 88 percent of anions data can be considered usable as qualified.
- The integrity of dissolved gases results for some samples could have been affected by improper preservation (pH greater than 2). No data was rejected due to these deficiencies, but results are qualified as estimated. One-hundred percent of the data can be considered usable as qualified.
- The completeness objective of 90 percent was not met for anions.

References Cited

CH2M HILL (CH2M). 2013. *Quality Assurance Project Plan, Revision 2, OMC Plant 2 Site, Waukegan, Illinois. WA No. 105-RARA-0528, Contract No. EP-S5-06-01.* March.

CH2M HILL (CH2M). 2017. Quality Assurance Project Plan Addendum II Letter, OMC Plant 2 Site, Waukegan, Illinois. WA No. 237-RARA-528, Contract No. EP-S5-06-01. October.

CH2M Hill (CH2M). 2019. Quality Assurance Project Plan Addendum III Letter, OMC Plant 2 Site, Waukegan, Illinois. WA No. 237-RARA-528, Contract No. EP-S5-06-01. February

U.S. Environmental Protection Agency (EPA). 2016. *National Functional Guidelines for Superfund Organic Methods Data Review*. EPA-540-R-2016-002. September.

Attachment 1
Katahdin Corrective Actions Reports
(CARs)

CAR0359 Page 1 of 3

KATAHDIN ANALYTICAL SERVICES, LLC. – CORRECTIVE ACTION REPORT

Problem Identificat initiating CAR)	ion (Person Name: Leslie Dimond Date: 08/10/2020							
Discovered by Lal	poratory X Discovered by Client (Complaint) Other							
The analytical holdin	g time was exceeded for the following samples:							
SN4244-1, the holding	ng time expired 6/15, the sample was analyzed 8 days outside of the holding time.							
SN4356-1, the holdir	ng time expired 6/16, the sample was analyzed 4 days outside of the holding time.							
SN4416-7, 8, 9, 10, 12, 14 and 15, the holding time expired 6/18, the sample was analyzed 5 days outside of the holding time								
Team: Facilitator: Leslie Dimond Lead: Leslie Dimond Members: George Brewer and Zach Fuller								
Officer)	gation & Determination (To be completed by Department Manager, Operations Manager and/or QA elow and investigate to determine whether one of them, or more than one, could be the cause of the							
Possible Causes	Details							
Machine (Instrument, PC, Software, Support Equipment, Maintenance)	Alkalinity is analyzed on the Autotitrator. This instrument was functioning properly at the time these samples were in house.							
Method (Process, SOPs, Informal procedures,	Each wet chemistry parameter has an analyst assigned to it. They are responsible for keeping track of the analytical holding time and ensuring analysis is performed within the holding time. If an analysis gets overburdened with sample load; it is the analyst's responsibility to communicate this to the Department Supervisor or the Department Manager.							
Activities, Customs, Habits, Culture)	Additionally, when a nonconformance occurs, a nonconformance report should be completed. This is then given to the Project Manager so they can contact the client. The client may decide to cancel the analysis or give the approval to report the results with narration of the nonconformance. A nonconformance report was not completed for these samples, therefore the client was never notified.							
Materials (Samples, Consumables, Standards, Gases)	The Wet Chemistry analysts print a daily worklist from our LIMS. The work list is organized by method, then work order number. It also lists the collection date, due date, holding time and number of days into the holding time. Any sample with less than 4 days left of holding time is emboldened.							
Metrics (Analyte lists, QC Limits, Reporting Limits, Trends in NCRs)	The alkalinity sample load was high at the time of the missed holding times but was manageable.							
Man (Activities, Capabilities, Communication, Training)	The analyst who was responsible for alkalinity analysis is no longer with Katahdin so we can not determine why the holding time exceedance occurred. His last day of employment was June 19th which was after the hold time for these samples expired but before the samples were reanalyzed. Poor communication within the department is the cause of this nonconformance.							
Mother Nature (Climate, Accidents, Power issues)	Not Applicable							

KATAHDIN ANALYTICAL SERVICES, LLC. - CORRECTIVE ACTION REPORT

Corrective Action Plan:	Name: Leslie Dimond	Date: 08/10/2020								
It was customary for the Wet Chemistry group to gather every morning for a brief meeting to determine what analysts were working on that day, if a specific analysis was overburdened with samples and needed help, and at what stage specific reports are in the reporting process. This practice had been suspended because of the pandemic and will be restarted 08/11/2020 with the appropriate safety precautions.										
All wet chemistry analysts will be reminded to complete nonconformance reports when quality control parameters are not met. The Project Manager will contact the client whenever they receive a nonconformance report.										
Review & Approval of Corrective A	Action Plan									
Supervisor Approval: You	o Brewer	Date: 08/10/70								
Operations Manager Approval:	mosh	Date: 8-10-2020								
Quality Assurance Officer: Les	lie Dimord	Date: 8-10-2020 Date: 081020								
Analyst (or refer to signatory list):		Date:								
Additional Information:										

CAR0359 Page **3** of **3**

KATAHDIN ANALYTICAL SERVICES, LLC. – CORRECTIVE ACTION REPORT

Monitoring of Corrective Action (To b	e completed by QA Offic	er and/or (Operation	s Manager): List details of follow-up
Corrective Action Effective	Return to Control -	Yes	No	Further Monitoring Needed/Additional Corrective Action
QA Approval:				Date:

CAR0360

Page 1 of 3

KATAHDIN ANALYTICAL SERVICES, LLC. – CORRECTIVE ACTION REPORT

Problem Identification	ion (Person	Name: Leslie Dimond	Date: 08	1/10/2020				
Discovered by Lat	ooratory	X Discovered by Client (C	Complaint)	Other				
Katahdin subcontrac	ted TOC samples	due to an instrument malfunct	ion without the	client's consent.				
Team: Facilitator: Leslie Dimond Lead: Leslie Dimond Members: Heather Manz, Galen Nickerson								
Officer)				e than one, could be the cause of the				
problem. Possible Causes			Details					
Machine (Instrument, PC, Software, Support Equipment, Maintenance)	troubleshooting of was uncertain. T exceed the analy	TOC instrument was not functioning, parts were ordered but they did not correct the probler bleshooting occurred, and more parts were ordered. The swiftness of getting it functioning a uncertain. The aqueous TOC sample load was very high, and Katahdin was worried that we led the analytical holding time for many samples. The decision was made to subcontract the oles, but the client was not contacted and did not give consent for the subcontracting.						
Method (Process, SOPs, Informal procedures, Activities, Customs, Habits, Culture)	intent to subcontr consent from the which we are not bid process. Wo	Catahdin's SOP SD-900, Subcontracting Analyses, states, the client shall always be informed of the ntent to subcontract any work. Katahdin's Quality Manual states, no work is subcontracted without onsent from the client. Though it is not explicitly stated, but both statements are concerning analyst/hich we are not certified to perform. Client notification of subcontracting samples is explicit during id process. Wording must be added to both documents to clarify, clients must be notified prior to ubcontracting any samples for any reason.						
Materials (Samples, Consumables, Standards, Gases)	Not Applicable							
Metrics (Analyte lists, QC Limits, Reporting Limits, Trends in NCRs)	Subcontracting s	amples due to instrument ma	lfunctions is no	t a common occurrence at Katahdin.				
Man (Activities, Capabilities, Communication, Training)		t Manager typically will notify clients if we need to subcontract samples due to an instrume The Project Manager was firstly concerned about getting the samples analyzed within e.						
Mother Nature (Climate, Accidents, Power issues)	Not Applicable							

CAR0360 Page 2 of 3

KATAHDIN ANALYTICAL SERVICES, LLC. - CORRECTIVE ACTION REPORT

Corrective Action Plan:	Name: Leslie Dimond	Date: 08/12/2020								
		lient notification of subcontracting samples due to notifying a client of samples being subcontracted.								
The update of SOP SD-900 will be complete by August 14 2020. The QAM update will be complete by August 21, 2020. The changes will reflect all clients.										
All Project Managers have b reason.	All Project Managers have been informed of the necessity of client consent prior to subcontracting any samples for any reason.									
Review & Approval of Cor	rective Action Plan									
Supervisor Approval:	islie Dimond	Date: 081230								
Operations Manager Approv	ral: hmth	Date: 08-12-2020								
Quality Assurance Officer:	Lesey Dimond	Date: 08 12 20								
Analyst (or refer to signatory	r list):	Date:								

CAR0360 Page 3 of 3

KATAHDIN ANALYTICAL SERVICES, LLC. - CORRECTIVE ACTION REPORT

Monitoring of Corrective Action (To	o be completed by QA Office	er and/or	Operation	s Manager): List details of follow-up
Corrective Action Effective	Return to Control –	Yes	No	Further Monitoring Needed/Additional Corrective Action
OA Amazonali				
QA Approval:				Date:

Data Usability Evaluation - June 2020

								CH2M		
					1.22.15		et l. B lu	Validator		
Sample Name	Sample ID	SDG	CAS#	Analyte	Initial Result	Lab Flag	Final Result	Qualifier	unit	Reason Code
OMC-EB060320	ETTY6	ETTR9	67-64-1	Acetone	1.6	J	10	U	ug/L	EB, FB
OMC-EB060320	20CO03-72	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	НТ
OMC-EB060320	20CO03-72	SN4356	14797-65-0	Nitrite	0.05	U	0.05	R	mg/L	НТ
OMC-FB060320	ETTY7	ETTR9	67-64-1	Acetone	1.8	J	10	U	ug/L	EB, FB
OMC-FB060320	20CO03-73	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	HT
OMC-FB060320	20CO03-73	SN4356	14797-65-0	Nitrite	0.05	U	0.05	R	mg/L	НТ
OMC-MW-11D	ETTP6	ETTP6	67-64-1	Acetone	3.1	J	10	U	ug/L	EB, TB
OMC-MW-11D	20CO03-01	SN4244	ALK	Alkalinity	510		510	J	mg/L	HT
OMC-MW-11D	20CO03-01	SN4244	14797-55-8	Nitrate	0.04	J	0.05	U	mg/L	MB
OMC-MW-11D-R	ETTP7	ETTP6	67-64-1	Acetone	2.9	J	10	U	ug/L	EB, TB
OMC-MW-11S	20CO03-05	SN4244	14797-55-8	Nitrate	0.065		0.065	U	mg/L	MB
OMC-MW-11S	20CO03-05	SN4244	18496-25-8	Sulfide	0.75	J	1	U	mg/L	EB
OMC-MW-3D	20CO03-04	SN4244	14797-55-8	Nitrate	0.2		0.2	U	mg/L	MB
OMC-MW-3S	20CO03-06	SN4244	14797-55-8	Nitrate	0.095		0.095	U	mg/L	MB
OMC-MW-3S	20CO03-06	SN4244	TOC	Total Organic Carbon	1.6		1.6	U	mg/L	MB
OMC-MW-501D	20CO03-07	SN4356	14797-55-8	Nitrate	0.12		0.12	U	mg/L	MB
OMC-MW-501S	20CO03-08	SN4356	16887-00-6	Chloride	7.3		7.3	U	mg/L	FB
OMC-MW-501S	20CO03-08	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	нт
OMC-MW-501S	20CO03-08	SN4356	14797-65-0	Nitrite	0.05	U	0.05	R	mg/L	нт
OMC-MW-501S	20CO03-08	SN4356	14808-79-8	Sulfate	5.2		5.2	U	mg/L	EB
OMC-MW-513D	20CO03-09	SN4244	14797-55-8	Nitrate	0.034	J	0.05	U	mg/L	MB
OMC-MW-513S	20CO03-10	SN4244	14797-55-8	Nitrate	0.12		0.12	U	mg/L	MB
OMC-MW-516D	ETTP8	ETTP6	67-64-1	Acetone	1.9	J	10	U	ug/L	EB, TB
OMC-MW-516D	20CO03-03	SN4356	ALK	Alkalinity	940		940	J	mg/L	нт
OMC-MW-516D	20CO03-03	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	MS <lcl, ht<="" td=""></lcl,>
OMC-MW-516D	20CO03-03	SN4356	14797-65-0	Nitrite	0.05	U	0.05	R	mg/L	нт
OMC-MW-516D	20CO03-03	SN4356	14808-79-8	Sulfate	0.88	J	1	U	mg/L	EB, FB, MB, MS/MSD <lcl< td=""></lcl<>
OMC-MW-516D	20CO03-03	SN4356	18496-25-8	Sulfide	0.8	J	1	U	mg/L	EB
OMC-MW-516S	20CO03-11	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	нт
OMC-MW-516S	20CO03-11	SN4356	14797-65-0	Nitrite	0.05	U	0.05	R	mg/L	нт
OMC-MW-528D	20CO03-12	SN4356	74-82-8	Methane	6.5	J	10	U	ug/L	EB, FB
OMC-MW-528D	20CO03-12	SN4356	14797-55-8	Nitrate	1.5		1.5	J	mg/L	нт
OMC-MW-528D	20CO03-12	SN4356	14797-65-0	Nitrite	0.05	U	0.05	R	mg/L	нт
OMC-MW-528S	20CO03-13	SN4244	74-82-8	Methane	2.9	J	10	U	ug/L	EB
OMC-MW-528S	20CO03-13	SN4244	TOC	Total Organic Carbon	2		2	U	mg/L	МВ
OMC-MW-600D	ETTQ9	ETTP6	67-64-1	Acetone	6	J	10	U	ug/L	EB, TB
OMC-MW-600D	20CO03-14	SN4244	14797-55-8	Nitrate	0.039	J	0.05	U	mg/L	MB
OMC-MW-601D	ETTR1	ETTR9	67-64-1	Acetone	7.6	J	10	U	ug/L	EB, FB
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Data Usability Evaluation - June 2020

								CH2M		
Constantion	Consider IB	50.0	046#	A 1	Initial Result	i di etc.	Final Result	Validator Qualifier		Barray Code
Sample Name	Sample ID	SDG	CAS#	Analyte Table Occasio Code	+	Lab Flag			unit	Reason Code
OMC-MW-601D	20CO03-16	SN4416	TOC	Total Organic Carbon	500		500	J	mg/L	HT
OMC-MW-601S	20CO03-17	SN4416	16887-00-6	Chloride	2.3		2.3	U	mg/L	FB
OMC-MW-601S	20CO03-17	SN4416	14797-65-0	Nitrite	0.12		0.12	J+	mg/L	MS>UCL
OMC-MW-601S	20CO03-17	SN4416	14808-79-8	Sulfate	12		12	J-	mg/L	MS <lcl< td=""></lcl<>
OMC-MW-601S	20CO03-17	SN4416	TOC	Total Organic Carbon	4		4	J	mg/L	HT
OMC-MW-602D	ETTR3	ETTR9	67-64-1	Acetone	4	J	10	U	ug/L	EB, FB
OMC-MW-602D	ETTR3	ETTR9	79-20-9	Methyl Acetate	33		33	J	ug/L	FD>RPD
OMC-MW-602D	20CO03-18	SN4356	18496-25-8	Sulfide	1.5		1.5	U	mg/L	EB
OMC-MW-602D-R	ETTR4	ETTR9	67-64-1	Acetone	3.4	J	10	U	ug/L	EB, FB
OMC-MW-602D-R	ETTR4	ETTR9	79-20-9	Methyl Acetate	20		20	J	ug/L	FD>RPD
OMC-MW-602D-R	20CO03-19	SN4356	TOC	Total Organic Carbon	51		51	J	mg/L	НТ
OMC-MW-602S	20CO03-20	SN4285	16887-00-6	Chloride	12		12	U	mg/L	FB
OMC-MW-604D	20CO03-23	SN4285	74-84-0	Ethane	10	U	10	UJ	ug/L	рН
OMC-MW-604D	20CO03-23	SN4285	74-85-1	Ethene	850		850	J	ug/L	рН
OMC-MW-604D	20CO03-23	SN4285	74-82-8	Methane	320		320	J	ug/L	рН
OMC-MW-604D	20CO03-23	SN4285	TOC	Total Organic Carbon	370		370	J	mg/L	HT
OMC-MW-604S	20CO03-24	SN4285	14808-79-8	Sulfate	5.6	J	10	U	mg/L	EB
OMC-MW-605D	ETTS0	ETTR8	67-64-1	Acetone	7.1	J	10	U	ug/L	EB
OMC-MW-605D	20CO03-25	SN4356	74-85-1	Ethene	8000		8000	J	ug/L	рН
OMC-MW-605D	20CO03-25	SN4356	74-82-8	Methane	14000		14000	J	ug/L	рН
OMC-MW-605D	20CO03-25	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	HT
OMC-MW-605D	20CO03-25	SN4356	14797-65-0	Nitrite	0.046	J	0.046	J	mg/L	HT
OMC-MW-605D	20CO03-25	SN4356	TOC	Total Organic Carbon	620		620	J	mg/L	HT
OMC-MW-605D-R	20CO03-26	SN4356	74-85-1	Ethene	8600		8600	J	ug/L	рН
OMC-MW-605D-R	20CO03-26	SN4356	74-82-8	Methane	15000		15000	J	ug/L	рН
OMC-MW-605D-R	20CO03-26	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	НТ
OMC-MW-605D-R	20CO03-26	SN4356	14797-65-0	Nitrite	0.035	J	0.035	J	mg/L	HT
OMC-MW-605D-R	20CO03-26	SN4356	TOC	Total Organic Carbon	600		600	J	mg/L	HT
OMC-MW-605S	20CO03-27	SN4356	74-82-8	Methane	6700	E	6700	J+	mg/L	LR
OMC-MW-605S	20CO03-27	SN4356	TOC	Total Organic Carbon	5.1		5.1	J	mg/L	нт
OMC-MW-606D	20CO03-28	SN4416	74-84-0	Ethane	54		54	J	ug/L	pH
OMC-MW-606D	20CO03-28	SN4416	74-85-1	Ethene	780		780	J	ug/L	pH
OMC-MW-606D	20CO03-28	SN4416	74-82-8	Methane	24000		24000	J	ug/L	рН
OMC-MW-606D	20CO03-28	SN4416	TOC	Total Organic Carbon	200		200	J	mg/L	нт
OMC-MW-606S	20CO03-29	SN4416	18496-25-8	Sulfide	1.4		1.4	U	mg/L	EB
OMC-MW-606S	20CO03-29	SN4416	TOC	Total Organic Carbon	2.7		2.7	J	mg/L	нт
OMC-MW-607D	20CO03-30	SN4416	ALK	Alkalinity	420		420	J	mg/L	нт
OMC-MW-607D	20CO03-30	SN4416	TOC	Total Organic Carbon	23		23	J	mg/L	нт
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Data Usability Evaluation - June 2020

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					Lateral Base III		et l. B lu	Validator		
Sample Name	Sample ID	SDG	CAS#	Analyte	Initial Result	Lab Flag	Final Result	Qualifier	unit	Reason Code
OMC-MW-607S	20CO03-31	SN4356	16887-00-6	Chloride	4.2		4.2	U	mg/L	FB
OMC-MW-607S	20CO03-31	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	НТ
OMC-MW-607S	20CO03-31	SN4356	14797-65-0	Nitrite	0.05	U	0.05	R	mg/L	HT
OMC-MW-610D	ETTS7	ETTR8	67-64-1	Acetone	1.1	J	10	U	ug/L	EB, TB
OMC-MW-610S	20CO03-33	SN4285	74-82-8	Methane	9.4	J	10	U	ug/L	EB
OMC-MW-610S	20CO03-33	SN4285	18496-25-8	Sulfide	0.8	J	1	U	mg/L	EB
OMC-MW-612D	20CO03-34	SN4356	74-84-0	Ethane	780		780	J	ug/L	рН
OMC-MW-612D	20CO03-34	SN4356	74-85-1	Ethene	540		540	J	ug/L	рН
OMC-MW-612D	20CO03-34	SN4356	74-82-8	Methane	24000		24000	J	ug/L	рН
OMC-MW-612D	20CO03-34	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	НТ
OMC-MW-612D	20CO03-34	SN4356	14797-65-0	Nitrite	0.0061	J	0.0061	J	mg/L	HT
OMC-MW-612D	20CO03-34	SN4356	TOC	Total Organic Carbon	1200		1200	J	mg/L	HT
OMC-MW-612S	ETTT0	ETTR8	67-64-1	Acetone	1	J	10	U	ug/L	EB, TB
OMC-MW-612S	20CO03-35	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	HT
OMC-MW-612S	20CO03-35	SN4356	14797-65-0	Nitrite	0.05	U	0.05	R	mg/L	нт
OMC-MW-612S	20CO03-35	SN4356	18496-25-8	Sulfide	2		2	U	mg/L	EB
OMC-MW-612S	20CO03-35	SN4356	TOC	Total Organic Carbon	5.6		5.6	J	mg/L	HT
OMC-MW-612S-R	20CO03-36	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	HT
OMC-MW-612S-R	20CO03-36	SN4356	14797-65-0	Nitrite	0.05	U	0.05	R	mg/L	HT
OMC-MW-612S-R	20CO03-36	SN4356	18496-25-8	Sulfide	1.1		1.1	U	mg/L	EB
OMC-MW-612S-R	20CO03-36	SN4356	TOC	Total Organic Carbon	5.4		5.4	J	mg/L	HT
OMC-MW-613D	20CO03-37	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	HT
OMC-MW-613D	20CO03-37	SN4356	14797-65-0	Nitrite	0.05	U	0.05	R	mg/L	нт
OMC-MW-613S	20CO03-38	SN4356	16887-00-6	Chloride	9.4		9.4	U	mg/L	FB
OMC-MW-614D	ETTT4	ETTR9	67-64-1	Acetone	7.8	J	10	U	ug/L	EB, FB
OMC-MW-614D	20CO03-39	SN4356	18496-25-8	Sulfide	0.78	J	1	U	mg/L	EB
OMC-MW-614D	ETTT4	ETTR9	108-88-3	Toluene	0.77	J	5	U	ug/L	ТВ
OMC-MW-614S	20CO03-40	SN4356	16887-00-6	Chloride	16		16	U	mg/L	FB
OMC-MW-614S	20CO03-40	SN4356	TOC	Total Organic Carbon	6		6	J	mg/L	нт
OMC-MW-615D	20CO03-41	SN4244	18496-25-8	Sulfide	0.82	J	1	U	mg/L	EB
OMC-MW-615S	20CO03-42	SN4244	14797-55-8	Nitrate	0.091		0.091	U	mg/L	MB
OMC-MW-619D	ETTT8	ETTR8	67-64-1	Acetone	2.7	J	10	U	ug/L	EB, FB
OMC-MW-619D	20CO03-43	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	нт
OMC-MW-619D	20CO03-43	SN4356	14797-65-0	Nitrite	0.05	U	0.05	R	mg/L	нт
OMC-MW-619D	20CO03-43	SN4356	18496-25-8	Sulfide	1.7		1.7	U	mg/L	EB
OMC-MW-619S	20CO03-45	SN4356	16887-00-6	Chloride	10		10	U	mg/L	FB
OMC-MW-619S	20CO03-45	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	нт
OMC-MW-619S	20CO03-45	SN4356	14797-65-0	Nitrite	0.05	U	0.05	R	mg/L	нт
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Data Usability Evaluation - June 2020

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Sample Name	Sample ID	SDG	CAS#	Analyte	Initial Result	Lab Flag	Final Result	Validator Qualifier	unit	Reason Code
OMC-MW-619S	20CO03-45	SN4356	18496-25-8	Sulfide	1.2	Lau Flag	1.2	U	mg/L	EB
OMC-MW-620D	20CO03-46	SN4416	74-84-0	Ethane	28		28	J	ug/L	рН
OMC-MW-620D	20CO03-46	SN4416	74-82-8	Methane	16000		16000	j	ug/L	рH
OMC-MW-620D	20CO03-46	SN4416	TOC	Total Organic Carbon	37		37	j	mg/L	HT
OMC-MW-620S	20CO03-47	SN4416	ALK	Alkalinity	410		410	j	mg/L	HT
OMC-MW-620S	20CO03-47	SN4416	16887-00-6	Chloride	6.7		6.7	U	mg/L	FB
OMC-MW-620S	20CO03-47	SN4416	TOC	Total Organic Carbon	4.4		4.4	J	mg/L	НТ
OMC-MW-621D	20CO03-48	SN4416	74-85-1	Ethene	19000		19000	J	ug/L	pH
OMC-MW-621D	20CO03-48	SN4416	74-82-8	Methane	15000		15000	j	ug/L	рH
OMC-MW-621D	20CO03-48	SN4416	TOC	Total Organic Carbon	580		580	J	mg/L	HT
OMC-MW-621S	20CO03-49	SN4416	ALK	Alkalinity	280		280	ı	mg/L	HT
OMC-MW-621S	20CO03-49	SN4416	16887-00-6	Chloride	190		190	J	mg/L	FD>RPD
OMC-MW-621S	20CO03-49	SN4416	14808-79-8	Sulfate	400		400	J	mg/L	FD>RPD
OMC-MW-621S	20CO03-49	SN4416	TOC	Total Organic Carbon	4.4		4.4	j	mg/L	HT
OMC-MW-621S-R	20CO03-50	SN4416	ALK	Alkalinity	250		250	J	mg/L	HT
OMC-MW-621S-R	20CO03-50	SN4416	16887-00-6	Chloride	94		94	J	mg/L	FD>RPD
OMC-MW-621S-R	20CO03-50	SN4416	14808-79-8	Sulfate	250		250	ı	mg/L	FD>RPD
OMC-MW-621S-R	20CO03-50	SN4416	TOC	Total Organic Carbon	3.6		3.6	j	mg/L	HT
OMC-MW-623D	20CO03-51	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	HT
OMC-MW-623D	20CO03-51	SN4356	14797-65-0	Nitrite	0.05	U	0.05	R	mg/L	HT
OMC-MW-623S	20CO03-52	SN4416	16887-00-6	Chloride	7.5	ŭ	7.5	U	mg/L	FB
OMC-MW-623S	20CO03-52	SN4416	18496-25-8	Sulfide	1.1		1.1	U	mg/L	EB
OMC-MW-623S	20CO03-52	SN4416	TOC	Total Organic Carbon	2.2		2.2	J	mg/L	HT
OMC-MW-624D	20CO03-53	SN4416	TOC	Total Organic Carbon	5		5	j	mg/L	HT
OMC-MW-624S	20CO03-54	SN4416	16887-00-6	Chloride	2.6		2.6	U	mg/L	FB
OMC-MW-624S	20CO03-54	SN4416	18496-25-8	Sulfide	0.72	J	1	U	mg/L	EB
OMC-MW-624S	20CO03-54	SN4416	TOC	Total Organic Carbon	1.2	•	1.2	j	mg/L	HT
OMC-MW-625D	20CO03-68	SN4285	74-84-0	Ethane	36		36	j	ug/L	pН
OMC-MW-625D	20CO03-68	SN4285	74-85-1	Ethene	270		270	j	ug/L	рН
OMC-MW-625D	20CO03-68	SN4285	74-82-8	Methane	650		650	j	ug/L	pН
OMC-MW-625S	20CO03-69	SN4285	16887-00-6	Chloride	16		16	U	mg/L	FB
OMC-MW-626D	20CO03-70	SN4416	18496-25-8	Sulfide	1.5		1.5	U	mg/L	EB
OMC-MW-626D	20CO03-70	SN4416	TOC	Total Organic Carbon	11		11	j	mg/L	НТ
OMC-MW-626S	20CO03-71	SN4356	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	HT
OMC-MW-626S	20CO03-71	SN4356	14797-65-0	Nitrite	0.05	U	0.05	R	mg/L	нт
OMC-MW-626S	20CO03-71	SN4356	TOC	Total Organic Carbon	5		5	J	mg/L	нт
OMC-ST-MW-1D	20CO03-57	SN4285	16887-00-6	Chloride	480	Е	480	J+	mg/L	LR
OMC-ST-MW-1D	20CO03-57	SN4285	14808-79-8	Sulfate	200	E	200	J+	mg/L	LCS>UCL, LR
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Data Usability Evaluation - June 2020

OMC Plant 2 Site (OU4), Waukegan, Illinois

								CH2M		
								Validator		
Sample Name	Sample ID	SDG	CAS#	Analyte	Initial Result	Lab Flag	Final Result	Qualifier	unit	Reason Code
OMC-ST-MW-1D	20CO03-57	SN4285	18496-25-8	Sulfide	0.95	J	1	U	mg/L	EB
OMC-ST-MW-1S	ETTX0	ETTR8	67-64-1	Acetone	1.6	J	10	U	ug/L	EB, TB
OMC-ST-MW-1S	20CO03-58	SN4285	16887-00-6	Chloride	4.8		4.8	U	mg/L	FB
OMC-ST-MW-1S-R	20CO03-59	SN4285	16887-00-6	Chloride	4.7		4.7	U	mg/L	FB
OMC-ST-MW-2D	ETTX2	ETTR8	67-64-1	Acetone	1.2	J	10	U	ug/L	EB, FB
OMC-ST-MW-2D	20CO03-60	SN4356	16887-00-6	Chloride	110		110	J-	mg/L	MS <lcl< td=""></lcl<>
OMC-ST-MW-2D	20CO03-60	SN4356	74-82-8	Methane	3000	В	3000	J	ug/L	рН
OMC-ST-MW-2D	20CO03-60	SN4356	14797-65-0	Nitrite	0.28		0.28	J+	mg/L	MS/MSD>UCL
OMC-ST-MW-3S	20CO03-63	SN4356	18496-25-8	Sulfide	0.95	J	1	U	mg/L	EB
OMC-ST-MW-4D	20CO03-64	SN4356	14797-55-8	Nitrate	0.31		0.31	J	mg/L	HT
OMC-ST-MW-4D	20CO03-64	SN4356	14797-65-0	Nitrite	0.05	U	0.05	R	mg/L	HT
OMC-ST-MW-4D	20CO03-64	SN4356	18496-25-8	Sulfide	1		1	U	mg/L	EB
OMC-ST-MW-4S	20CO03-65	SN4416	ALK	Alkalinity	350		350	J	mg/L	HT
OMC-ST-MW-4S	20CO03-65	SN4416	TOC	Total Organic Carbon	4.2		4.2	J	mg/L	HT
OMC-ST-MW-5D	20CO03-66	SN4416	ALK	Alkalinity	460		460	J	mg/L	HT
OMC-ST-MW-5D	20CO03-66	SN4416	14797-65-0	Nitrite	0.2		0.2	J+	mg/L	MS>UCL
OMC-ST-MW-5D	20CO03-66	SN4416	14808-79-8	Sulfate	17		17	J-	mg/L	MS <lcl< td=""></lcl<>
OMC-ST-MW-5D	20CO03-66	SN4416	TOC	Total Organic Carbon	4.4		4.4	J	mg/L	HT
OMC-ST-MW-5S	20CO03-67	SN4416	16887-00-6	Chloride	62		62	J-	mg/L	MS <lcl< td=""></lcl<>
OMC-ST-MW-5S	20CO03-67	SN4416	74-84-0	Ethane	10	U	10	UJ	ug/L	MS/MSD <lcl< td=""></lcl<>
OMC-ST-MW-5S	20CO03-67	SN4416	18496-25-8	Sulfide	0.84	J	1	U	mg/L	EB
OMC-ST-MW-5S	20CO03-67	SN4416	TOC	Total Organic Carbon	6.3		6.3	J	mg/L	HT
OMC-W-5	20CO03-55	SN4416	18496-25-8	Sulfide	0.93	J	1	U	mg/L	EB
OMC-W-5	20CO03-55	SN4416	TOC	Total Organic Carbon	2.7		2.7	J	mg/L	нт
OMC-W-5-R	20CO03-56	SN4416	ALK	Alkalinity	280		280	J	mg/L	нт
OMC-W-5-R	20CO03-56	SN4416	TOC	Total Organic Carbon	2.8		2.8	J	mg/L	НТ

Definitions:

ug/L = micrograms per liter; mg/L = milligrams per liter

Reason Code Definitions:

MS/MSD<LCL = Matrix spike/Matrix spike duplicate recovery falls below Lower control limit; MS/MSD>UCL = Matrix spike/Matrix spike duplicate recovery exceeds upper control limit;

FD>RPD = field duplicate and parent sample results exceeds relative percent difference criteria; LCS>UCL = analyte in laboratory control sample exceeds the upper control limit

LR = sample result concentration exceeded linear range; **pH** = sample pH out of criteria

HT = hold time exceedance; EB = equipment blank contamination; FB = field blank contamination; MB = method blank contamination, TB = trip blank contamination

Attachment 3 ESAT Validation Narratives

Techlaw Document Controlled Number: 83074-8-33-702-DV-1237UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V SUPERFUND AND EMERGENCY MANAGEMENT DIVISION

DATE:										
SUBJECT:	Review of Data Received for Review on: <u>June 16, 2020</u>									
FROM:	Timothy Prendiville, Branch Chief (SR-6J) Science and Quality Assurance Branch									
TO:	Data User: Email Address:	Jacobs kaitlin.ma@jacobs.com								
	This package was requested and reviewed as a Stage 2b Validation Electronic and Manual Deliverable (S2bVEM)									
We have revie	ewed the data for the fo	ollowing case:								
SITE Name:	Outboard Marin	ne Corp, Waukegan Harbor Si	te (IL)							
Case No: <u>489</u>	<u>MA N</u>	o:	SDG No:	ETTP6						
Number and T	Type of Samples: 20 w	vaters (Volatiles)								
Sample Numb	·	P9, ETTQ0, ETTQ1, ETTQ4 FR7, ETTT6, ETTT7, ETTX3		<u> R0,</u>						
Laboratory:	Chemtech Consulting	Group (CHM)	Hrs. for Revie	ew:						
Following are	our findings:									

CC: Howard Pham

Region 5 ESAT Contracting Officer's Representative

Mail Code: SR-6J

Page 2 of 7
Case No: 48931
Site Name: Outboard Marine Corporation (IL)
Page 2 of 7
SDG No: ETTP6
Laboratory: CHM

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twenty (20) preserved water samples; ETTP6 – ETTP9, ETTQ0, ETTQ1, ETTQ4 – ETTQ9, ETTR0, ETTR5 - ETTR7, ETTT6, ETTT7, ETTX3 and ETTY8, were shipped to Chemtech Consulting Group (CHM) located in Mountainside, NJ. The samples were collected 06/01-02/2020 and received intact and properly cooled 06/02-03/2020.

All samples were analyzed for the CLP Low Level VOC analytes according to CLP SOW SOM02.4 (10/2016All sample results were reviewed according to the April 2020 QAPP Addendum 1 for OMC Waukegan Harbor Site (WA No. 228RARA-0528), September 2017 NFG for SOM02.4 (EPA-540-R-2017-002) and the Region 5 Organic CLP Validation SOP (DCN 83074 -8-33-601-DV-1143).

Sample ETTP8 was designated for the laboratory QC, i.e. MS/MSD analyses.

Sample ETTY8 was identified as a trip blank. Sample ETTP7 was identified as a field duplicate of sample ETTP6.

Only the qualifications reflected in the EXES Sample Summary report are described in this narrative.

Reviewed by: Allison C Harvey / Techlaw-ESAT

Page 3 of 7
Case No: 48931
Site Name: Outboard Marine Corporation (IL)
Page 3 of 7
SDG No: ETTP6
Laboratory: CHM

1. PRESERVATION AND HOLDING TIMES

NONE FOUND.

2. GC/MS and GC/ECD INSTRUMENT PERFORMANCE CHECK

NONE FOUND.

3. INITIAL CALIBRATION

Method – Volatile Organics

EXES-988

The following samples are associated with an initial calibration in which a DMC did not meet relative response factor (RRF) criteria. Detects are not qualified. Nondetects are not qualified.

ETTP6, ETTP7, ETTP8, ETTP8MS, ETTP8MSD, ETTP9, ETTQ0, ETTQ1, ETTQ4, ETTQ5, ETTQ6, ETTQ7, ETTQ8, ETTQ9, ETTR0, ETTR5, ETTR6, ETTR7, ETTT6, ETTT7, ETTX3, ETTY8, VBLK66, VBLK67, VBLK68 trans-1,3-Dichloropropene-d4

4. INITIAL CALIBRATION VERIFICATION

NONE FOUND.

5. CONTINUING CALIBRATION

Method – Volatile Organics

EXES-614

The following samples are associated with an opening or closing CCV with DMC RRF exceeding criteria. Detects are not qualified. Nondetects are not qualified.

ETTP6, ETTP7, ETTP8, ETTP8MS, ETTP8MSD, ETTP9, ETTQ0, ETTQ1, ETTQ4, ETTQ5, ETTQ6, ETTQ7, ETTQ8, ETTQ9, ETTR0, ETTR5, ETTR6, ETTR7, ETTT6, ETTT7, ETTX3, ETTY8, VBLK66, VBLK67 trans-1,3-Dichloropropene-d4

6. BLANKS

NONE FOUND.

7. DEUTERATED MONITORING COMPOUNDS / SURROGATES

Method - Volatile Organics

Reviewed by: Allison C Harvey / Techlaw-ESAT

Page 4 of 7
Case No: 48931
Site Name: Outboard Marine Corporation (IL)
Page 4 of 7
SDG No: ETTP6
Laboratory: CHM

EXES-792

The following samples have DMC/surrogate percent recoveries less than the primary minimum criteria but greater than or equal to the expanded minimum criteria. Detects are qualified as estimated J-. Nondetects are qualified as estimated UJ.

ETTP8, ETTQ6, ETTR6DL, ETTT6, ETTX3, ETTY8 1,1-Dichloroethene, trans-1,2-Dichloroethene, cis-1,2-Dichloroethene

EXES-982

The following samples have DMC/surrogate percent recoveries greater than the primary maximum criteria. Detects are qualified as estimated J+. Nondetects are not qualified.

ETTR6

Acetone, 2-Butanone, 4-Methyl-2-pentanone, 2-Hexanone

ETTT6

4-Methyl-2-pentanone, 2-Hexanone

8. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

NONE FOUND.

9. CLEANUP PROCEDURES

Not applicable.

10. LABORATORY CONTROL SAMPLE

Not applicable.

11. INTERNAL STANDARD

NONE FOUND.

12. TARGET ANALYTE QUANTITATION LIMIT

Method - Trace Volatiles

The following samples had one or more target analytes that exceeded the calibration range. The affected analytes are reported from the diluted analyses and are reported with the appropriate dilution factor in the EXES Sample Summary Report.

ETTP6, ETTP7

Vinyl chloride, cis-1,2-Dichloroethene

Reviewed by: Allison C Harvey / Techlaw-ESAT

Page 5 of 7
Case No: 48931
Site Name: Outboard Marine Corporation (IL)
Page 5 of 7
SDG No: ETTP6
Laboratory: CHM

ETTP8 Benzene

ETTR6

Vinyl chloride, Methyl acetate, cis-1,2-Dichloroethene

The following samples had one or more target analytes that exceeded the calibration range. No diluted analyses were performed. Detects are qualified as estimated J.

ETTP8MS, ETTP8MSD Benzene

Method - Volatile Organics

EXES-790

The following samples have analyte results greater than or equal to method detection limit (MDL) and below contract required quantitation limit (CRQL). Detects are qualified as estimated J.

ETTP6, ETTP7

1,1-Dichloroethene, Acetone, trans-1,2-Dichloroethene, Trichloroethene

ETTP8, ETTP8MS, ETTP8MSD, ETTQ9

Acetone

ETTQ7

cis-1,2-Dichloroethene

ETTR5

Vinyl chloride

ETTR6

1,1-Dichloroethene, trans-1,2-Dichloroethene

ETTR7

Vinyl chloride, Methyl acetate, cis-1,2-Dichloroethene

ETTT6

Chloroethane, trans-1,2-Dichloroethene, 2-Butanone

ETTT7

Vinyl chloride, cis-1,2-Dichloroethene

ETTY8

Acetone, Toluene

Reviewed by: Allison C Harvey / Techlaw-ESAT

Page 6 of 7
Case No: 48931
Site Name: Outboard Marine Corporation (IL)
Page 6 of 7
SDG No: ETTP6
Laboratory: CHM

13. TENTATIVELY IDENTIFIED COMPOUNDS

Not Validated.

14. SYSTEM PERFORMANCE

NONE FOUND.

15. FIELD QC SAMPLES

Review not required under specified validation stage.

16. SAMPLE RESULTS

None found.

17. QAPP COMPLIANCE

The analytical package was compliant with the QAPP Worksheets #12, #15, #19, #35 and #36.

Reviewed by: Allison C Harvey / Techlaw-ESAT

Page 7 of 7
Case No: 48931
Site Name: Outboard Marine Corporation (IL)
Page 7 of 7
SDG No: ETTP6
Laboratory: CHM

Validation Data Qualifier Sheet

<u>Qualifiers</u>	<u>Data Qualifier Definitions</u>
U	The analyte was analyzed for and was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the results may be biased high.
J-	The result is an estimated quantity, but the results may be biased low.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
UJ	The analyte was analyzed for and was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
С	The target Pesticide or Aroclor analyte identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).
X	The target Pesticide or Aroclor analyte identification was not confirmed when GC/MS analysis was performed.

Reviewed by: Allison C Harvey / Techlaw-ESAT

Techlaw Document Controlled Number: 83074-8-33-702-DV-1238UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V SUPERFUND AND EMERGENCY MANAGEMENT DIVISION

DATE:						
SUBJECT:	Review of Data Received for Review on: <u>June 19, 2020</u>					
FROM:	Timothy Prendiville, Branch Chief (SR-6J) Science and Quality Assurance Branch					
TO:	Data User: Email Address:	Jacobs kaitlin.ma@jacobs.com				
This package was requested and reviewed as a Stage 2b Validation Electronic and Manual Deliverable (S2bVEM)						
We have revie	ewed the data for the fo	ollowing case:				
SITE Name:	Outboard Marin	ne Corp, Waukegan Harbor	Site (IL)			
Case No: <u>489</u>	<u>031</u> MA N	(o:	SDG No:	ETTP9		
Number and T	Type of Samples: 17 w	vaters (Aroclors)				
Sample Numbers: <u>ETTP9, ETTQ2, ETTQ3, ETTS7, ETTS8, ETTT2, ETTW5, ETTX0 – ETTX6, ETTX9, ETTY6, ETTY7</u>						
Laboratory:	Chemtech Consulting	g Group (CHM)	Hrs. for Rev	iew:		
Following are	our findings:					

CC: Howard Pham

Region 5 ESAT Contracting Officer's Representative

Mail Code: SR-6J

Page 2 of 7
Case No: 48931
Site Name: Outboard Marine Corporation (IL)
Page 2 of 7
SDG No: ETTP9
Laboratory: CHM

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Seventeen (17) water samples; ETTP9, ETTQ2, ETTQ3, ETTS7, ETTS8, ETTT2, ETTW5, ETTX0 – ETTX6, ETTX9, ETTY6 and ETTY7, were shipped to Chemtech Consulting Group (CHM) located in Mountainside, NJ. The samples were collected 06/01-03/2020 and received intact and properly cooled 06/02-04/2020.

All samples were analyzed for the CLP Aroclor analytes according to CLP SOW SOM02.4 (10/2016. All sample results were reviewed according to the April 2020 QAPP Addendum 1 for OMC Waukegan Harbor Site (WA No. 228RARA-0528), September 2017 NFG for SOM02.4 (EPA-540-R-2017-002) and the Region 5 Organic CLP Validation SOP (DCN 83074 -8-33-601-DV-1143).

Sample ETTX2 was designated for the laboratory QC, i.e. MS/MSD analyses.

Sample ETTY6 was identified as an equipment blank. Sample ETTY7 was identified as a field blank. Sample ETTX1 is the field duplicate of ETTX0.

Only the qualifications reflected in the EXES Sample Summary report are described in this narrative.

Reviewed by: Allison C Harvey / Techlaw-ESAT

Page 3 of 7
Case No: 48931
Site Name: Outboard Marine Corporation (IL)

Page 3 of 7
SDG No: ETTP9
Laboratory: CHM

1. PRESERVATION AND HOLDING TIMES

NONE FOUND.

2. GC/MS and GC/ECD INSTRUMENT PERFORMANCE CHECK

NONE FOUND.

3. INITIAL CALIBRATION

NONE FOUND.

4. INITIAL CALIBRATION VERIFICATION

NONE FOUND.

5. CONTINUING CALIBRATION

NONE FOUND.

6. BLANKS

NONE FOUND.

7. DEUTERATED MONITORING COMPOUNDS / SURROGATES

Method - Aroclors

EXES-795

The following samples have surrogate percent recoveries greater than the expanded maximum criteria. Detects are qualified as estimated J+. Nondetects are not qualified.

ETTQ3

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

ETTT2

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

ETTX0, ETTX1

Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

Reviewed by: Allison C Harvey / Techlaw-ESAT Date: July 6, 2020

Page 4 of 7
Case No: 48931
Site Name: Outboard Marine Corporation (IL)

Page 4 of 7
SDG No: ETTP9
Laboratory: CHM

ETTX1DL Aroclor-1016

EXES-971

The following samples have surrogate percent recoveries greater than the primary maximum criteria but are less than or equal to the expanded maximum criteria. Detects are qualified as estimated J+. Nondetects are not qualified.

ETTP9

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

ETTT2

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

EXES-983

The following diluted samples have surrogate percent recoveries less than the expanded minimum criteria. Detects are not qualified. Nondetects are not qualified.

ETTT2DL, ETTX9, ETTX9DL

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

8. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

NONE FOUND.

9. CLEANUP PROCEDURES

NONE FOUND.

10. LABORATORY CONTROL SAMPLE

NONE FOUND.

11. INTERNAL STANDARD

Not Applicable.

12. TARGET ANALYTE QUANTITATION LIMIT

Method - Aroclors

Reviewed by: Allison C Harvey / Techlaw-ESAT

Page 5 of 7
Case No: 48931
Site Name: Outboard Marine Corporation (IL)
Page 5 of 7
SDG No: ETTP9
Laboratory: CHM

The following samples had one or more target analytes that exceeded the calibration range. The affected analytes are reported from the diluted analyses and are reported with the appropriate dilution factor in the EXES Sample Summary Report.

ETTT2, ETTX9 Aroclor-1248

ETTX0, ETTX1 Aroclor-1016

EXES-1509

The following samples have result difference between the two columns greater than 25%. Detects are qualified as estimated J.

ETTX0DL, ETTX1DL Aroclor-1016

ETTQ3, ETTX2MSD, ETTX2MSD Aroclor-1248

EXES-790

The following samples have analyte results greater than or equal to method detection limit (MDL) and below contract required quantitation limit (CRQL). Detects are qualified as estimated J.

ALCS21 Aroclor-1260

ETTX2, ETTX4, ETTX6 Aroclor-1248

13. TENTATIVELY IDENTIFIED COMPOUNDS

Not Applicable.

14. SYSTEM PERFORMANCE

NONE FOUND.

15. FIELD QC SAMPLES

Review not required under specified validation stage.

Reviewed by: Allison C Harvey / Techlaw-ESAT

Page 6 of 7
Case No: 48931
Site Name: Outboard Marine Corporation (IL)
Page 6 of 7
SDG No: ETTP9
Laboratory: CHM

16. SAMPLE RESULTS

None found.

17. QAPP COMPLIANCE

The analytical package was compliant with the QAPP Worksheets #12, #15, #19, #35 and #36.

Reviewed by: Allison C Harvey / Techlaw-ESAT

Page 7 of 7
Case No: 48931
Site Name: Outboard Marine Corporation (IL)
Page 7 of 7
SDG No: ETTP9
Laboratory: CHM

Validation Data Qualifier Sheet

<u>Qualifiers</u>	<u>Data Qualifier Definitions</u>
U	The analyte was analyzed for and was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the results may be biased high.
J-	The result is an estimated quantity, but the results may be biased low.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
UJ	The analyte was analyzed for and was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
С	The target Pesticide or Aroclor analyte identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).
X	The target Pesticide or Aroclor analyte identification was not confirmed when GC/MS analysis was performed.

Reviewed by: Allison C Harvey / Techlaw-ESAT

Techlaw Document Controlled Number: 83074-8-33-702-DV-1255UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V SUPERFUND AND EMERGENCY MANAGEMENT DIVISION

DATE:					
SUBJECT:	Review of Data Received for Review on: <u>June 19, 2020</u>				
FROM:	Timothy Prendiville, Branch Chief (SR-6J) Science and Quality Assurance Branch				
TO:	Data User: <u>Jacobs</u> Email Address: <u>kaitlin.ma@jacobs.com</u>				
This package Deliverable (S	-	eviewed as a Stage 2b V	alidation Electror	nic and Manual	
We have revie	ewed the data for the fo	ollowing case:			
SITE Name:	Outboard Marir	ne Corp, Waukegan Harb	or Site (IL)		
Case No: <u>489</u>	<u>MA N</u>	o:	SDG No:	ETTR8	
Number and T	Type of Samples: 20 w	vaters (Low/Medium Vol	atiles)		
Sample Numb		80 – ETTS2, ETTS7, ET W5, ETTX0 – ETTX2, E Y9			
Laboratory:	Chemtech Consulting	g Group (CHM)	Hrs. for Rev	iew:	
Following are	our findings:				

CC: Howard Pham

Region 5 ESAT Contracting Officer's Representative

Mail Code: SR-6J

Page 2 of 6
Case No: 48931
Site Name: Outboard Marine Corporation (IL)
Page 2 of 6
SDG No: ETTR8
Laboratory: CHM

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twenty (20) preserved water samples; ETTR8, ETTS0 – ETTS2, ETTS7, ETTS8, ETTT0, ETTT1, ETTT8, ETTT9, ETTW5, ETTX0 – ETTX2, ETTX4, ETTX5, ETTX9, ETTY2, ETTY3 and ETTY9, were shipped to Chemtech Consulting Group (CHM) located in Mountainside, NJ. The samples were collected 06/02-03/2020 and received intact and properly cooled on 06/03-04/2020.

All samples were analyzed for the CLP VOC analytes according to CLP SOW SOM02.4 (10/2016). All sample results were reviewed according to the April 2020 QAPP Addendum 1 for OMC Waukegan Harbor Site (WA No. 228RARA-0528), September 2017 NFG for SOM02.4 (EPA-540-R-2017-002) and the Region 5 Organic CLP Validation SOP (DCN 83074 -8-33-601-DV-1143).

Sample ETTX2 was designated for the laboratory QC, i.e. MS/MSD analyses.

Sample ETTY9 was identified as a trip blank. Sample ETTS1 is a field duplicate of sample ETTS0. Sample ETTX1 is a field duplicate of sample ETTX1 is a field duplicate of sample ETTX1.

Only the qualifications reflected in the EXES Sample Summary report are described in this narrative.

Reviewed by: Allison C Harvey / Techlaw-ESAT

Page 3 of 6
Case No: 48931
Site Name: Outboard Marine Corporation (IL)
Page 3 of 6
SDG No: ETTR8
Laboratory: CHM

1. PRESERVATION AND HOLDING TIMES

NONE FOUND.

2. GC/MS and GC/ECD INSTRUMENT PERFORMANCE CHECK

NONE FOUND.

3. INITIAL CALIBRATION

Method - Volatile Organics

EXES-988

The following samples are associated with an initial calibration in which a DMC did not meet relative response factor (RRF) criteria. Detects are not qualified. Nondetects are not qualified.

ETTS0, ETTS1, ETTS7, ETTT0, ETTT1, ETTT9, ETTW5, ETTX0, ETTX1, ETTX2, ETTX2MS, ETTX2MSD, ETTX4, ETTX5, ETTX9, ETTY9, VBLK71 trans-1,3-Dichloropropene-d4

4. INITIAL CALIBRATION VERIFICATION

NONE FOUND.

5. CONTINUING CALIBRATION

NONE FOUND.

6. BLANKS

NONE FOUND.

7. DEUTERATED MONITORING COMPOUNDS / SURROGATES

Method – Volatile Organics

EXES-792

The following samples have DMC/surrogate percent recoveries less than the primary minimum criteria but greater than or equal to the expanded minimum criteria. Detects are qualified as estimated J-. Nondetects are qualified as estimated UJ.

ETTT9, ETTX2MSD, ETTX5

Dichlorodifluoromethane, Chloromethane, Bromomethane, Chloroethane, Carbon disulfide

Reviewed by: Allison C Harvey / Techlaw-ESAT

Page 4 of 6
Case No: 48931
Site Name: Outboard Marine Corporation (IL)
Page 4 of 6
SDG No: ETTR8
Laboratory: CHM

8. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

NONE FOUND.

9. CLEANUP PROCEDURES

Not applicable.

10. LABORATORY CONTROL SAMPLE

Not applicable.

11. INTERNAL STANDARD

NONE FOUND.

12. TARGET ANALYTE QUANTITATION LIMIT

Method - Volatile Organics

The following samples had one or more target analytes that exceeded the calibration range. The affected analytes are reported from the diluted analyses and are reported with the appropriate dilution factor in the EXES Sample Summary Report.

ETTS0, ETTS1, ETTS7 Vinyl chloride, cis-1,2-Dichloroethene ETTX9 cis-1,2-Dichloroethene

EXES-790

The following samples have analyte results greater than or equal to method detection limit (MDL) and below contract required quantitation limit (CRQL). Detects are qualified as estimated J.

ETTS0

1,1-Dichloroethene, Acetone, Carbon disulfide, Chloroform

ETTS1

1,1-Dichloroethene, Acetone

ETTS2

trans-1,2-Dichloroethene

Reviewed by: Allison C Harvey / Techlaw-ESAT

Page 5 of 6
Case No: 48931
Site Name: Outboard Marine Corporation (IL)
Page 5 of 6
SDG No: ETTR8
Laboratory: CHM

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ETTS7

1,1-Dichloroethene, Acetone, trans-1,2-Dichloroethene, 1,1-Dichloroethane

ETTS8

trans-1,2-Dichloroethene

ETTT0, ETTX0, ETTX2, ETTX2MS

Vinyl chloride, Acetone

ETTT1, ETTW5, ETTX1, ETTX2MSD

Vinyl chloride

ETTT8

Chloroethane, Acetone

ETTX9

Vinyl chloride, 1,1-Dichloroethene

ETTY3

cis-1,2-Dichloroethene

ETTY9

Acetone, Toluene

13. TENTATIVELY IDENTIFIED COMPOUNDS

Not Validated.

14. SYSTEM PERFORMANCE

NONE FOUND.

15. FIELD QC SAMPLES

Review not required under specified validation stage.

16. SAMPLE RESULTS

None found.

17. QAPP COMPLIANCE

The analytical package was compliant with the QAPP Worksheets #12, #15, #19, #35 and #36.

Reviewed by: Allison C Harvey / Techlaw-ESAT

Date: July 6, 2020

Page 6 of 6
Case No: 48931
Site Name: Outboard Marine Corporation (IL)
Page 6 of 6
SDG No: ETTR8
Laboratory: CHM

Validation Data Qualifier Sheet

<u>Qualifiers</u>	Data Qualifier Definitions		
U	The analyte was analyzed for and was not detected above the reported sample quantitation limit.		
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.		
J+	The result is an estimated quantity, but the results may be biased high.		
J-	The result is an estimated quantity, but the results may be biased low.		
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.		
UJ	The analyte was analyzed for and was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.		
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.		
С	The target Pesticide or Aroclor analyte identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).		
X	The target Pesticide or Aroclor analyte identification was not confirmed when GC/MS analysis was performed.		

Reviewed by: Allison C Harvey / Techlaw-ESAT

Date: July 6, 2020

Techlaw CONTROLLED DOCUMENT NUMBER: 83074-8-33-702-DV-1245

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

SUPERFUND AND EMERGENCY MANAGEMENT DIVISION

DATE:

SUBJECT: Review of Data

Received for Review on: June 19, 2020

FROM: Timothy Prendiville, Branch Chief (SR-6J)

Science and Quality Assurance Branch

TO: Data User: Jacob

Contact Person: <u>Kaitlin.ma@jacobs.com</u>

This package was requested and reviewed as a Stage 2B Validation Electronic and Manual Deliverable (S2BVEM)

We have reviewed the data for the following case:

Site Name: Outboard Marine Corporation (IL)

Case No: 48931 MA No: NA SDG No: ETTR9

Number and Type of Samples: 20 Waters (low level VOA)

Sample Numbers: ETTQ2, ETTQ3, ETTR1 - ETTR4, ETTR9, ETTS3, ETTS4, ETTS6, ETTS9,

ETTT2 -ETTT5, ETTX6, ETTY5 - ETTY7 and ETTZ0

Laboratory: Chemtech Consulting Group (CHM) Hrs. for Review:

Following are our findings:

CC: Howard Pham

Region 5 ESAT Contracting Officer's Representative (COR)

Mail Code: SR-6J

Page 2 of 7
Case: 48931
Site: Outboard Marine Corp.

Page 2 of 7
SDG: ETTR9
Laboratory: Chemtech

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twenty (20) water samples, numbered ETTQ2, ETTQ3, ETTR1 - ETTR4, ETTR9, ETTS3, ETTS4, ETTS6, ETTS9, ETTT2 -ETTT5, ETTX6, ETTY5 - ETTY7 and ETTZ0, were shipped to Chemtech Consulting Group (CHM) located in Mountainside, NJ. The samples were collected between June 2 and June 4, 2020. The samples were received between June 3 and June 5, 2020 intact and within the temperature requirement of \leq 6°C.

All samples were analyzed for the CLP Low Level VOC analytes according to CLP SOW SOM02.4 (10/2016). All sample results were reviewed according to the April 2020 QAPP Addendum 1 for OMC Waukegan Harbor Site (WA No. 228RARA-0528), September 2017 NFG for SOM02.4 (EPA-540-R-2017-002) and the Region 5 Organic CLP Validation SOP (DCN 83074 -8-33-601-DV-1143).

Sample ETTR2 was designated by the samplers to be used for laboratory QC, i.e. MS/MSD analyses.

Sample ETTY6 was identified as an equipment blank. Sample ETTY7 was identified as the field blank. Sample ETTZ0 was identified as a trip blank.

Sample ETTR4 was identified as field duplicate of ETTR3.

Only qualifications to the final results reflected in the EXES Sample Summary are described in the narrative.

Page 3 of 7
Case: 48931
Site: Outboard Marine Corp.

Page 3 of 7
SDG: ETTR9
Laboratory: Chemtech

1. PRESERVATION AND HOLDING TIMES

No Problems found.

2. GC/MS AND GC/ECD INSTRUMENT PERFORMANCE CHECK

No Problems found.

3. INITIAL CALIBRATION

No Problems found.

4. INITIAL CALIBRATION VERIFICATION

No Problems found.

5. CONTINUING CALIBRATION

EXES-614

The following samples are associated with an opening or closing CCV with DMC RRF exceeding criteria. Detects are not qualified. Nondetects are not qualified.

ETTR1, ETTR9, ETTT4, ETTT5, VBLK79, VBLK80, VHBLK01 trans-1,3-Dichloropropene-d4

6. BLANKS

No Problems found.

7. DEUTERATED MONITORING COMPOUNDS / SURROGATES

EXES-792

The following samples have DMC/surrogate percent recoveries less than the primary minimum criteria but greater than or equal to the expanded minimum criteria. Detects are qualified as estimated J-. Nondetects are qualified as estimated UJ.

ETTS3

1,1-Dichloroethene, trans-1,2-Dichloroethene, Trichloroethene, Toluene, Tetrachloroethene, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Isopropylbenzene

ETTS4, ETTY6, ETTY7

1,1-Dichloroethene, trans-1,2-Dichloroethene, cis-1,2-Dichloroethene

Page 4 of 7
Case: 48931
Site: Outboard Marine Corp.
Laboratory: Chemtech

ETTS9

Dichlorodifluoromethane, Chloromethane, Bromomethane, Chloroethane, 1,1-Dichloroethene, Carbon Disulfide, trans-1,2-Dichloroethene, cis-1,2-Dichloroethene

EXES-982

The following samples have DMC/surrogate percent recoveries greater than the primary maximum criteria. Detects are qualified as estimated J+. Nondetects are not qualified.

ETTZ0

Chlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

8. MATRIX SPIKE / MATRIX SPIKE DUPLICATE

No Problems found.

9. CLEANUP PROCEDURES

Not applicable.

10. LABORATORY CONTROL SAMPLE

Not applicable.

11. INTERNAL STANDARD

No Problems found.

12. TARGET ANALYTE QUANTITATION LIMIT

The following volatile samples have analyte results greater than the upper limit of calibration range. Samples were re-analyzed at dilution to bring the detections within the calibration ranges.

ETTR3, ETTR4, ETTS3, ETTT4

Vinyl chloride, cis-1,2-Dichloroethene

ETTS4

Vinyl chloride

ETTY5

cis-1,2-Dichloroethene, Trichloroethene

EXES-790

The following samples have analyte results greater than or equal to detection limit (MDL) and below quantitation limit (CRQL). Detects are qualified as estimated J.

Page 5 of 7
Case: 48931
Site: Outboard Marine Corp.
Laboratory: Chemtech

ETTQ2

Vinyl chloride, Benzene

ETTO3

Vinyl chloride, 1,1-Dichloroethane

ETTR1

Acetone, Carbon disulfide, 1,1-Dichloroethane

ETTR3, ETTR4

Acetone, Carbon disulfide

ETTS3

Carbon disulfide, trans-1,2-Dichloroethene

ETTS9

4-Methyl-2-pentanone

ETTT3

Trichloroethene

ETTT4

Acetone, trans-1,2-Dichloroethene, Toluene

ETTY5

trans-1,2-Dichloroethene

ETTY6, ETTY7, VBLK80

Acetone

ETTZ0

Toluene

13. TENTATIVELY IDENTIFIED COMPOUNDS

Review not required under specified validation stage.

14. SYSTEM PERFORMANCE

No Problems found.

15. FIELD QC SAMPLES

Review not required under specified validation stage.

Reviewed by: Steffanie Tobin / TechLaw-ESAT

Date: July 07, 2020

Page 6 of 7
Case: 48931
Site: Outboard Marine Corp.
Laboratory: Chemtech

16. SAMPLE RESULTS

No Problems found.

17. QAPP COMPLIANCE

The analytical package was compliant with the QAPP Worksheets #12, #15, #19, #35 & #36.

Reviewed by: Steffanie Tobin / TechLaw-ESAT

Date: July 07, 2020

Page 7 of 7
Case: 48931
Site: Outboard Marine Corp.
Page 7 of 7
SDG: ETTR9
Laboratory: Chemtech

Validation Data Qualifier Sheet

<u>Qualifiers</u>	Data Qualifier Definitions		
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.		
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.		
J+	The result is an estimated quantity, but the results may be biased high.		
J-	The result is an estimated quantity, but the results may be biased low.		
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.		
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.		
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.		
С	The Target Pesticide or Aroclor analyte identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).		
X	The Target Pesticide or Aroclor analyte identification was not confirmed when GC/MS analysis was performed.		

Techlaw CONTROLLED DOCUMENT NUMBER: 83074-8-33-702-DV-1246

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

SUPERFUND AND EMERGENCY MANAGEMENT DIVISION

DATE:

SUBJECT: Review of Data

Received for Review on: June 19, 2020

FROM: Timothy Prendiville, Branch Chief (SR-6J)

Science and Quality Assurance Branch

TO: Data User: Jacob

Contact Person: Kaitlin.ma@jacobs.com

This package was requested and reviewed as a Stage 2B Validation Electronic and Manual Deliverable (S2BVEM)

We have reviewed the data for the following case:

Site Name: Outboard Marine Corporation (IL)

Case No: 48931 MA No: NA SDG No: ETTS5

Number and Type of Samples: 16 Waters (low level VOA)

Sample Numbers: ETTS5, ETTW0 - ETTW4, ETTW6 - ETTW9, ETTX7, ETTX8, ETTY0,

ETTY1, ETTY4 and ETTZ1

Laboratory: <u>Chemtech Consulting Group (CHM)</u> Hrs. for Review:

Following are our findings:

CC: Howard Pham

Region 5 ESAT Contracting Officer's Representative (COR)

Mail Code: SR-6J

Page 2 of 6
Case: 48931
SDG: ETTS5
Site: Outboard Marine Corp.
Laboratory: Chemtech

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Sixteen (16) water samples, numbered ETTS5, ETTW0 - ETTW4, ETTW6 - ETTW9, ETTX7, ETTX8, ETTY0, ETTY1, ETTY4 and ETTZ1, were shipped to Chemtech Consulting Group (CHM) located in Mountainside, NJ. The samples were collected June 4, 2020. The samples were received June 5, 2020 intact and within the temperature requirement of ≤ 6 °C.

All samples were analyzed for the CLP Low Level VOC analytes according to CLP SOW SOM02.4 (10/2016). All sample results were reviewed according to the April 2020 QAPP Addendum 1 for OMC Waukegan Harbor Site (WA No. 228RARA-0528), September 2017 NFG for SOM02.4 (EPA-540-R-2017-002) and the Region 5 Organic CLP Validation SOP (DCN 83074 -8-33-601-DV-1143).

Sample ETTY1 was designated by the samplers to be used for laboratory QC, i.e. MS/MSD analyses.

Sample ETTZ1 was identified as a trip blank.

Samples ETTW3/ETTW4 and ETTW8/ETTW9 were identified as field duplicate pairs.

Only qualifications to the final results reflected in the EXES Sample Summary are described in the narrative.

Page 3 of 6
Case: 48931
SDG: ETTS5
Site: Outboard Marine Corp.
Laboratory: Chemtech

1. PRESERVATION AND HOLDING TIMES

No Problems found.

2. GC/MS AND GC/ECD INSTRUMENT PERFORMANCE CHECK

No Problems found.

3. INITIAL CALIBRATION

No Problems found.

4. INITIAL CALIBRATION VERIFICATION

No Problems found.

5. CONTINUING CALIBRATION

EXES-614

The following samples are associated with an opening or closing CCV with DMC RRF exceeding criteria. Detects are not qualified. Nondetects are not qualified.

ETTS5, ETTW0, ETTW1, ETTW2, ETTW3, ETTW4, ETTW6, ETTW7, ETTW8, ETTW9, ETTX7, ETTX8, ETTY1, ETTY1MS, ETTY1MSD, ETTY4, ETTZ1, VBLK79, VBLK80, VBLK82, VHBLK01 trans-1,3-Dichloropropene-d4

6. BLANKS

EXES-1104

The following samples have analyte results reported less than CRQLs. The associated method blank results are less than CRQLs. Detects are qualified U. Sample results have been reported at CRQLs.

ETTW0, ETTW1, ETTW3, ETTW4, ETTW7, ETTX8, ETTY4 Acetone

7. DEUTERATED MONITORING COMPOUNDS / SURROGATES

EXES-792

The following samples have DMC/surrogate percent recoveries less than the primary minimum criteria but greater than or equal to the expanded minimum criteria. Detects are qualified as estimated J-. Nondetects are qualified as estimated UJ.

Page 4 of 6
Case: 48931
Site: Outboard Marine Corp.
Laboratory: Chemtech

ETTW2, ETTW9

1,1-Dichloroethene, trans-1,2-Dichloroethene, cis-1,2-Dichloroethene

ETTW6, ETTW7, ETTX7, ETTX8, ETTY0

1,1-Dichloroethene, trans-1,2-Dichloroethene, cis-1,2-Dichloroethene, Trichloroethene, Toluene, Tetrachloroethene, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Isopropylbenzene

8. MATRIX SPIKE / MATRIX SPIKE DUPLICATE

No Problems found.

9. CLEANUP PROCEDURES

Not applicable.

10. LABORATORY CONTROL SAMPLE

Not applicable.

11. INTERNAL STANDARD

No Problems found.

12. TARGET ANALYTE QUANTITATION LIMIT

The following volatile samples have analyte results greater than the upper limit of calibration range. Samples were re-analyzed at dilution to bring the detections within the calibration ranges.

ETTS5

cis-1,2-Dichloroethene, Trichloroethene

EXES-790

The following samples have analyte results greater than or equal to detection limit (MDL) and below quantitation limit (CRQL). Detects are qualified as estimated J.

ETTS5

trans-1,2-Dichloroethene

ETTW0

cis-1,2-Dichloroethene, Trichloroethene

ETTW1

Methyl acetate

Page 5 of 6
Case: 48931
Site: Outboard Marine Corp.
Laboratory: Chemtech

ETTW2, ETTY4 Vinyl chloride

ETTX7 Chloroform

ETTX8

1,1-Dichloroethane

ETTY0

Vinyl chloride, o-Xylene

ETTY1, ETTY1MS, ETTY1MSD Ethylbenzene, o-Xylene, m,p-Xylene

ETTZ1 Toluene

VBLK80 Acetone

13. TENTATIVELY IDENTIFIED COMPOUNDS

Review not required under specified validation stage.

14. SYSTEM PERFORMANCE

No Problems found.

15. FIELD QC SAMPLES

Review not required under specified validation stage.

16. SAMPLE RESULTS

No Problems found.

17. QAPP COMPLIANCE

The analytical package was compliant with the QAPP Worksheets #12, #15, #19, #35 & #36.

Reviewed by: Steffanie Tobin / TechLaw-ESAT

Date: July 02, 2020

Page 6 of 6
Case: 48931
SDG: ETTS5
Site: Outboard Marine Corp.
Laboratory: Chemtech

Validation Data Qualifier Sheet

<u>Qualifiers</u>	Data Qualifier Definitions		
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.		
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.		
J+	The result is an estimated quantity, but the results may be biased high.		
J-	The result is an estimated quantity, but the results may be biased low.		
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.		
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.		
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.		
С	The Target Pesticide or Aroclor analyte identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).		
X	The Target Pesticide or Aroclor analyte identification was not confirmed when GC/MS analysis was performed.		

Techlaw CONTROLLED DOCUMENT NUMBER: 83074-8-33-702-DV-1247

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

SUPERFUND AND EMERGENCY MANAGEMENT DIVISION

DATE:

SUBJECT: Review of Data

Received for Review on: June 22, 2020

FROM: Timothy Prendiville, Branch Chief (SR-6J)

Science and Quality Assurance Branch

TO: Data User: <u>Jacob</u>

Contact Person: Kaitlin.ma@jacobs.com

This package was requested and reviewed as a Stage 2B Validation Electronic and Manual Deliverable (S2BVEM)

We have reviewed the data for the following case:

Site Name: Outboard Marine Corporation (IL)

Case No: 48931 MA No: NA SDG No: ETTW6

Number and Type of Samples: 8 Waters (aroclor)

Sample Numbers: ETTW6 - ETTW9, ETTX7, ETTX8, ETTY0, ETTY1

Laboratory: Chemtech Consulting Group (CHM) Hrs. for Review:

Following are our findings:

CC: Howard Pham

Region 5 ESAT Contracting Officer's Representative (COR)

Mail Code: SR-6J

Page 2 of 6
Case: 48931
Site: Outboard Marine Corp.

Page 2 of 6
SDG: ETTW6
Laboratory: Chemtech

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Eight (8) water samples, numbered ETTW6 - ETTW9, ETTX7, ETTX8, ETTY0 and ETTY1 were shipped to Chemtech Consulting Group (CHM) located in Mountainside, NJ. The samples were collected June 4, 2020. The samples were received on June 5, 2020 intact and within the temperature requirement of $\leq 6^{\circ}$ C.

All samples were analyzed for the CLP Low Level VOC analytes according to CLP SOW SOM02.4 (10/2016). All sample results were reviewed according to the April 2020 QAPP Addendum 1 for OMC Waukegan Harbor Site (WA No. 228RARA-0528), September 2017 NFG for SOM02.4 (EPA-540-R-2017-002) and the Region 5 Organic CLP Validation SOP (DCN 83074 -8-33-601-DV-1143).

Sample ETTY1 was designated by the samplers to be used for laboratory QC, i.e. MS/MSD analyses.

No sample were identified as trip blanks, field blanks or equipment blanks.

Samples ETTW8/ETTW9 were identified as a field duplicate pair.

Only qualifications to the final results reflected in the EXES Sample Summary are described in the narrative.

Page 3 of 6
Case: 48931
Site: Outboard Marine Corp.

Page 3 of 6
SDG: ETTW6
Laboratory: Chemtech

1. PRESERVATION AND HOLDING TIMES

No Problems found.

2. GC/MS AND GC/ECD INSTRUMENT PERFORMANCE CHECK

No Problems found.

3. INITIAL CALIBRATION

No Problems found.

4. INITIAL CALIBRATION VERIFICATION

No Problems found.

5. CONTINUING CALIBRATION

No Problems found.

6. BLANKS

No Problems found.

7. DEUTERATED MONITORING COMPOUNDS / SURROGATES

EXES-971

The following samples have surrogate percent recoveries greater than the primary maximum criteria but are less than or equal to the expanded maximum criteria. Detects are qualified as estimated J+. Nondetects are not qualified.

ETTW6, ETTW8, ETTW9, ETTX7, ETTX8, ETTY0

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, 1262, Aroclor-1268

EXES-983

The following diluted samples have surrogate percent recoveries less than the expanded minimum criteria. Detects and nondetects are not qualified.

ETTY1DL2

Page 4 of 6
Case: 48931
Site: Outboard Marine Corp.
Laboratory: Chemtech

8. MATRIX SPIKE / MATRIX SPIKE DUPLICATE

EXES-975

The following matrix/matrix spike duplicate samples have percent recoveries greater than the primary maximum criteria. Detects are qualified as estimated J. Nondetects are not qualified.

ETTY1MS, ETTY1MSD Aroclor-1016, Aroclor-1260

9. CLEANUP PROCEDURES

Not applicable.

10. LABORATORY CONTROL SAMPLE

No Problems found.

11. INTERNAL STANDARD

Not applicable.

12. TARGET ANALYTE QUANTITATION LIMIT

The following samples have analyte results greater than the upper limit of calibration range. Samples were re-analyzed at dilution to bring the detections within the adjusted calibration ranges.

ETTY1, ETTY1DL Aroclor-1242

The following samples have analyte results greater than the upper limit of calibration range. Detects are qualified J. No further dilution was performed because these samples were used for QC purpose only.

ETTY1MS, ETTY1MSD Aroclor-1016, Aroclor-1242

EXES-790

The following samples have analyte results greater than or equal to detection limit (MDL) and below quantitation limit (CRQL). Detects are qualified as estimated J.

ETTW6, ETTX7, ETTY0 Aroclor-1242

Page 5 of 6
Case: 48931
Site: Outboard Marine Corp.
Laboratory: Chemtech

ALCS38 Aroclor-1260

13. TENTATIVELY IDENTIFIED COMPOUNDS

Not applicable.

14. SYSTEM PERFORMANCE

No Problems found.

15. FIELD QC SAMPLES

Review not required under specified validation stage.

16. SAMPLE RESULTS

EXES-1509

The following samples have result difference between the two columns greater than 25%. Detects are qualified J.

ETTX7 Aroclor-1242

ETTY1MS, ETTY1MSD Aroclor-1260

17. QAPP COMPLIANCE

The analytical package was compliant with the QAPP Worksheets #12, #15, #19, #35 & #36.

Page 6 of 6
Case: 48931
SDG: ETTW6
Site: Outboard Marine Corp.
Laboratory: Chemtech

Validation Data Qualifier Sheet

<u>Qualifiers</u>	Data Qualifier Definitions		
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.		
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.		
J+	The result is an estimated quantity, but the results may be biased high.		
J-	The result is an estimated quantity, but the results may be biased low.		
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.		
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.		
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.		
C	The Target Pesticide or Aroclor analyte identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).		
X	The Target Pesticide or Aroclor analyte identification was not confirmed when GC/MS analysis was performed.		

Techlaw Document Controlled Number: 83074-8-33-702-DV-1230 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

SUPERFUND AND EMERGENCY MANAGEMENT DIVISION

DATE:	06/26/2020		
SUBJECT:	Review of Data Received for review on 06/16/2020		
FROM:	Timothy Prendiville, Branch Chief (SR-6J) Science and Quality Assurance Branch		
TO:	Data User: <u>Jacobs</u> Contact Person: <u>Kaitlin.ma@jacobs.com</u>		
This packag Deliverable (e was requested and reviewed as a Stage 2B Validation Electronic and Manua (S2BVEM)		
We have rev	riewed the data for the following case:		
Site Name: _	Outboard Marine Corp. (IL)		
Case Numbe	er: <u>48931</u> SDG Number: <u>METTP6</u>		
Number and	l Type of Samples: 20 waters (ICP/AES)		
Sample Num	nbers: METTP6-P9, Q0-Q1, Q4-Q9, R0, R5-R8, T6-T7		
Laboratory:	Chemtech Hrs. for Review:		
	re our findings:		

CC: Howard Pham

Region 5 ESAT Contracting Officer's Representative (COR)

Mail Code: SR-6J

Case: 48931 SDG: METTP6 Page 2 of 5

Site: Outboard Marine Corp.

Laboratory: Chemtech

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twenty (20) water samples, numbered METTP6-P9, Q0-Q1, Q4-Q9, R0, R5-R8 and T6-T7, were collected June 1 and June 2, 2020. The lab received the samples on June 2and June 3, 2020 in good condition. All samples were analyzed for arsenic, iron and manganese. All samples were analyzed using the CLP SOW ISM02.4 analysis procedures. The data were reviewed according to the April 2020 QAPP Addendum 1 for OMC Waukegan Harbor Site (WA No. 228-RARA-0528), January 2017 NFG for ISM02.4 (EPA-540-R-2017-001) and the Region 5 Inorganic CLP Validation, DCN/SOP 83074-8-33-607-SO-1138. All analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) procedure.

No samples were identified as field blanks. METTP6/METTP7 is field duplicate.

Only the qualifications reflected in the EXES Sample Summary report are described in this narrative.

Case: 48931 SDG: METTP6 Page 3 of 5

Site: Outboard Marine Corp.

Laboratory: Chemtech

1. HOLDING TIMES AND PRESERVATION:

No defects were found.

2. CALIBRATIONS:

No defects were found.

3. BLANKS:

EXES-476

Defect Message: The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Arsenic

METTQ0, METTQ4, METTQ5, METTQ6, METTQ7, METTQ8, METTR0, METTR6

EXES-478/EXES 479

The following inorganic samples are associated with an ICB/CCB or preparation blank concentration which is greater than the method detection limit (MDL). The sample result is greater than the MDL.

Hits greater than the CRQL but less than 5 times the blank are qualified "J+".

Arsenic

METTP6, METTP7, METTR5, METTR8, METTT7, METTX3

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

No defects were found.

5. LABORATORY AND FIELD DUPLICATE:

No defects were found.

6. ANALYSIS:

EXES-1334

Defect Message: The following samples are associated to the Serial Dilution sample with analyte %D > 10% and the original sample result is > 50xMDL. Detects are qualified as estimated J. Non-detects are qualified estimated UJ.

Case: 48931 SDG: METTP6 Page 4 of 5

Site: Outboard Marine Corp.

Laboratory: Chemtech

Iron

METTP6, METTP7, METTP8, METTP9, METTQ0, METTQ1, METTQ4, METTQ5, METTQ6, METTQ7, METTQ8, METTQ9, METTR0, METTR5, METTR6, METTR7, METTR8, METTT6, METTT7, METTX3

7. SAMPLE RESULTS:

EXES-790

Defect Message: The following samples have analyte results greater than or equal to detection limit (MDL) and below quantitation limit (CRQL). Detects are qualified as estimated J.

Manganese

METTQ5, METTQ7

8. **QAPP COMPLIANCE:**

The analytical package was compliant with QAPP Worksheets #12, #15, #19, #35, and #36.

Case: 48931 SDG: METTP6 Page 5 of 5

Site: Outboard Marine Corp. Laboratory: Chemtech

EXES ISM02.4 Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions	
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.	
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	
J+	The result is an estimated quantity, but the result may be biased high.	
J-	The result is an estimated quantity, but the result may be biased low.	
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	

Techlaw Document Controlled Number: 83074-8-33-702-DV-1231 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

SUPERFUND AND EMERGENCY MANAGEMENT DIVISION

DATE:	06/29/2020	
SUBJECT:	Review of Data Received for review on <u>06/16/2020</u>	
FROM:	Timothy Prendiville, Branch Chief (SR-6J) Science and Quality Assurance Branch	
то:	Data User: <u>Jacobs</u> Contact Person: <u>Kaitlin.ma@jacobs.com</u>	
This packag Deliverable (e was requested and reviewed as a Stage 2B Validation Electronic and Manual (S2BVEM)	
We have rev	iewed the data for the following case:	
Site Name: _	Outboard Marine Corp. (IL)	
Case Number: 48931 SDG Number: METTQ2		
Number and	Type of Samples: 20 waters (ICP/AES)	
Sample Num	abers: METTQ2-Q3, R1-R4, S3-S6, S9, T2-T4, X6, W0-W1, Y5-Y7	
Laboratory:	Chemtech Hrs. for Review:	
•	re our findings:	

CC: Howard Pham

Region 5 ESAT Contracting Officer's Representative (COR)

Mail Code: SR-6J

Case: 48931 SDG: METTQ2 Page 2 of 5

Site: Outboard Marine Corp.

Laboratory: Chemtech

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twenty (20) water samples, numbered METTQ2-Q3, R1-R4, S3-S6, S9, T2-T4, X6, W0-W1, Y5-Y7, were collected June 3 and June 4, 2020. The lab received the samples June 4 and June 5, 2020 in good condition. All samples were analyzed for arsenic, iron and manganese. All samples were analyzed using the CLP SOW ISM02.4 analysis procedures. The data were reviewed according to the April 2020 QAPP Addendum 1 for OMC Waukegan Harbor Site (WA No. 228-RARA-0528), January 2017 NFG for ISM02.4 (EPA-540-R-2017-001) and the Region 5 Inorganic CLP Validation, DCN/SOP 83074-8-33-607-SO-1138. All analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) procedure.

METTY6 was identified as equipment blank and METTY7 was identified as field blank. METTR3 and METTR4 were identified as field duplicates.

Only the qualifications reflected in the EXES Sample Summary report are described in this narrative.

Case: 48931 SDG: METTQ2 Page 3 of 5

Site: Outboard Marine Corp.

Laboratory: Chemtech

1. HOLDING TIMES AND PRESERVATION:

No defects were found.

2. CALIBRATIONS:

No defects were found.

3. BLANKS:

EXES-476

Defect Message: The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Arsenic

METTS4, METTS6, METTY6

EXES-478/479

The following inorganic samples are associated with an ICB/CCB or preparation blank concentration which is greater than the method detection limit (MDL). The sample result is greater than the MDL.

Hits greater than the CRQL but less than 5 times the blank are qualified "J+".

Arsenic

METTR1, METTR2, METTR3, METTR4, METTS5, METTS9, METTT2, METTT3, METTT4, METTW0, METTX6, METTY5

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

No defects were found.

5. LABORATORY AND FIELD DUPLICATE:

No defects were found.

6. ANALYSIS:

No defects were found.

7. SAMPLE RESULTS:

EXES-790

Defect Message: The following samples have analyte results greater than or equal to detection limit (MDL) and below quantitation limit (CRQL). Detects are qualified as estimated J.

Case: 48931 SDG: METTQ2 Page 4 of 5

Site: Outboard Marine Corp.

Laboratory: Chemtech

Iron

METTS4

Manganese

METTX6

8. **QAPP COMPLIANCE:**

The analytical package was compliant with QAPP Worksheets #12, #15, #19, #35, and #36.

Case: 48931 SDG: METTQ2 Page 5 of 5

Site: Outboard Marine Corp.

Laboratory: Chemtech

EXES ISM02.4 Data Qualifier Sheet

<u>Qualifiers</u>	<u>Data Qualifier Definitions</u>
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Techlaw Document Controlled Number: 83074-8-33-702-DV-1232 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION ${\sf V}$

SUPERFUND AND EMERGENCY MANAGEMENT DIVISION

DATE:	06/29/2020		
SUBJECT:	Review of Data Received for review on 06/16/2020		
FROM:	Timothy Prendiville, Branch Chief (SR-6J) Science and Quality Assurance Branch		
то:	Data User: <u>Jacobs</u> Contact Person: <u>Kaitlin.ma@jacobs.com</u>		
This packag Deliverable (e was requested and reviewed as a Stage 2B Validation Electronic and Manua (S2BVEM)		
We have rev	viewed the data for the following case:		
Site Name: _	Outboard Marine Corp. (IL)		
Case Numbe	er: 48931 SDG Number: METTR9		
Number and	l Type of Samples: 20 waters (ICP/AES)		
Sample Num	nbers: <u>METTR9, S0-S2, S7-S8, T0-T1, T5, T8-T9, X0-X2, X4-X5, X9, W5, Y2-Y3</u>		
Laboratory:	Chemtech Hrs. for Review:		
Following ar	re our findings:		

CC: Howard Pham

Region 5 ESAT Contracting Officer's Representative (COR)

Mail Code: SR-6J

Case: 48931 SDG: METTR9 Page 2 of 5

Site: Outboard Marine Corp.

Laboratory: Chemtech

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twenty (20) water samples, numbered METTR9, S0-S2, S7-S8, T0-T1, T5, T8-T9, X0-X2, X4-X5, X9, W5 and Y2-Y3, were collected June 2 and June 3, 2020. The lab received the samples on June 3 and June 4, 2020 in good condition. All samples were analyzed for arsenic, iron and manganese. All samples were analyzed using the CLP SOW ISM02.4 analysis procedures. The data were reviewed according to the April 2020 QAPP Addendum 1 for OMC Waukegan Harbor Site (WA No. 228-RARA-0528), January 2017 NFG for ISM02.4 (EPA-540-R-2017-001) and the Region 5 Inorganic CLP Validation, DCN/SOP 83074-8-33-607-SO-1138. All analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) procedure.

No samples were identified as field blanks. METTS0/METTS1 and METTX0/METTX1 were identified as field duplicate pairs. No defects were found for the field duplicate samples.

Only the qualifications reflected in the EXES Sample Summary report are described in this narrative.

Case: 48931 SDG: METTR9 Page 3 of 5

Site: Outboard Marine Corp.

Laboratory: Chemtech

1. HOLDING TIMES AND PRESERVATION:

No defects were found.

2. CALIBRATIONS:

No defects were found.

3. BLANKS:

EXES-476

Defect Message: The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Arsenic

METTS0, METTS7, METTT5, METTT8, METTT9, METTW5, METTX0, METTX1, METTX4, METTY2, METTY3

The following inorganic samples are associated with an ICB/CCB or preparation blank concentration which is greater than the method detection limit (MDL). The sample result is greater than the MDL.

Hits greater than the CRQL but less than 5 times the blank are qualified "J+".

Arsenic

METTS2, METTT0, METTT1, METTX2, METTX5, METTX9

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

No defects were found.

5. LABORATORY AND FIELD DUPLICATE:

No defects were found.

6. ANALYSIS:

EXES-1334

Defect Message: The following samples are associated to the Serial Dilution sample with analyte %D >10% and the original sample result is > 50xMDL. Detects are qualified as estimated J. Non-detects are qualified estimated UJ.

Iron

METTR9, METTS0, METTS1, METTS2, METTS7, METTS8, METTT0, METTT1, METTT5, METTT8, METTT9, METTW5, METTX0, METTX1, METTX2, METTX4, METTX5, METTX9, METTY2, METTY3

Case: 48931 SDG: METTR9 Page 4 of 5

Site: Outboard Marine Corp.

Laboratory: Chemtech

7. SAMPLE RESULTS:

EXES-790

Defect Message: The following samples have analyte results greater than or equal to detection limit (MDL) and below quantitation limit (CRQL). Detects are qualified as estimated J.

Manganese

METTS8

8. **QAPP COMPLIANCE:**

The analytical package was compliant with QAPP Worksheets #12, #15, #19, #35, and #36.

Case: 48931 SDG: METTR9 Page 5 of 5

Site: Outboard Marine Corp. Laboratory: Chemtech

EXES ISM02.4 Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions	
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.	
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	
J+	The result is an estimated quantity, but the result may be biased high.	
J-	The result is an estimated quantity, but the result may be biased low.	
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	

Techlaw Document Controlled Number: 83074-8-33-702-DV-1233UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V SUPERFUND AND EMERGENCY MANAGEMENT DIVISION

DATE:	06/29/2020	
SUBJECT:	Review of Data Received for review on	06/16/2020
	Received for review off	00/10/2020
FROM:	Timothy Prendiville, Bra Science and Quality Ass	
TO:	Data User: <u>Jacobs</u> Contact Person: <u>Kaitlin.ma@jacobs.com</u>	
This packag Deliverable (<u>-</u>	wed as a Stage 2B Validation Electronic and Manual
We have rev	riewed the data for the foll	owing case:
Site Name: _	Outboard Marine Corp. (IL)
Case Numbe	er: <u>48931</u>	SDG Number: METTW2
Number and	l Type of Samples: <u>12 wat</u>	ers (ICP/AES)
Sample Num	nbers: <u>METTX7-X8, W2-</u>	W4, W6-W9, Y0-Y1, Y4
Laboratory:	Chemtech	Hrs. for Review:
Following ar	re our findings:	
CC: Howard	Pham	
D : 5	TEGATE OF STATE OF ST	, D (COD)

Region 5 ESAT Contracting Officer's Representative (COR)

Mail Code: SR-6J

Case: 48931 SDG: METTW2 Page 2 of 4

Site: Outboard Marine Corp.

Laboratory: Chemtech

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twelve (12) water samples, numbered METTX7-X8, W2-W4, W6-W9, Y0-Y1 and Y4, were collected June 4, 2020. The lab received the samples on June 5, 2020 in good condition. All samples were analyzed for arsenic, iron and manganese. All samples were analyzed using the CLP SOW ISM02.4 analysis procedures. The data were reviewed according to the April 2020 QAPP Addendum 1 for OMC Waukegan Harbor Site (WA No. 228-RARA-0528), January 2017 NFG for ISM02.4 (EPA-540-R-2017-001) and the Region 5 Inorganic CLP Validation, DCN/SOP 83074-8-33-607-SO-1138. All analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) procedure.

No samples were identified as field blanks. METTW3/METTW4 and METTW8/METTW9 are field duplicate pairs.

Only the qualifications reflected in the EXES Sample Summary report are described in this narrative.

Case: 48931 SDG: METTW2 Page 3 of 4

Site: Outboard Marine Corp.

Laboratory: Chemtech

1. HOLDING TIMES AND PRESERVATION:

No defects were found.

2. CALIBRATIONS:

No defects were found.

3. BLANKS:

No defects were found.

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

No defects were found.

5. LABORATORY AND FIELD DUPLICATE:

The following inorganic analytes are associated with field duplicate results which did not meet technical data validation criteria; however, no sample results are qualified for field duplicates.

METTW3/METTW4

Iron, Manganese

6. ANALYSIS:

No defects were found.

7. SAMPLE RESULTS:

EXES-790

Defect Message: The following samples have analyte results greater than or equal to detection limit (MDL) and below quantitation limit (CRQL). Detects are qualified as estimated J.

Arsenic

METTW7, METTW8, METTW9

8. **QAPP COMPLIANCE:**

The analytical package was compliant with QAPP Worksheets #12, #15, #19, #35, and #36.

Case: 48931 SDG: METTW2 Page 4 of 4

Site: Outboard Marine Corp. Laboratory: Chemtech

EXES ISM02.4 Data Qualifier Sheet

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